UNIVERSITY LECTURERS VIEWS OF THE LEVEL OF SUSTAINABILITY AWARENESS AMONG COMPUTER EDUCATION STUDENTS

OPINIÃO DE PROFESSORES UNIVERSITÁRIOS SOBRE O NÍVEL DE CONSCIENTIZAÇÃO SOBRE SUSTENTABILIDADE ENTRE ESTUDANTES DE EDUCAÇÃO EM INFORMÁTICA

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ABSTRACT

The purpose of this research is to examine how the communication model used in primary schools affects the academic performance of migrant students from Syria, as perceived by both teachers and students. The study aims to determine whether the communication model has positive or negative effects on the academic success of these students. Thus, the case study approach, a qualitative research methodology, was deemed favorable. The major subjects of this study are Syrian refugees now enrolled in elementary schools in the Turkish cities of Gaziantep as well as Hatay, as well as the instructors who instruct these pupils. Twenty-two Syrian refugee pupils and fifteen of their teachers were interviewed using a semi-structured form to collect their perspectives. NVivo R1 was used to do the analysis on the data collected during the semi-structured interview. The research findings indicate that the lack of proficiency in Turkish language had a detrimental impact on the academic performance of the students. The imperative for school stakeholders to address the communication challenges faced by immigrant students necessitates a collaborative approach. The lecturer adeptness in communication and their preparedness in handling immigrant students facilitate their ability to effectively address any challenges that may arise within the educational institutions they serve. The positive impact of this will be reflected in the accomplishment of two educators as well as learners.

Keywords: Communication. Educator Accomplishment. Migrant Learners. Schoolings.
**RESUMO**

O objetivo desta pesquisa é examinar como o modelo de comunicação usado nas escolas primárias afeta o desempenho acadêmico de estudantes migrantes da Síria, percebidos por professores e alunos. O estudo visa determinar se o modelo de comunicação tem efeitos positivos ou negativos no sucesso acadêmico desses alunos. Assim, a abordagem do estudo de caso, uma metodologia de pesquisa qualitativa, foi considerada favorável. Os principais sujeitos deste estudo são refugiados sírios agora matriculados em escolas primárias nas cidades turcas de Gaziantep e Hatay, bem como os instrutores que instruem esses alunos. Vinte e dois alunos refugiados sírios e quinze de seus professores foram entrevistados usando um formulário semiestruturado para coletar suas perspectivas. O NVivo R1 foi utilizado para fazer a análise dos dados coletados durante a entrevista semiestruturada. Os resultados da pesquisa indicam que a falta de proficiência na língua turca teve um impacto negativo no desempenho acadêmico dos alunos. O imperativo para as partes interessadas da escola abordarem os desafios de comunicação enfrentados pelos alunos imigrantes exige uma abordagem colaborativa. A habilidade do palestrante em comunicação e sua preparação para lidar com alunos imigrantes facilitam sua capacidade de enfrentar com eficácia quaisquer desafios que possam surgir nas instituições educacionais que atendem. O impacto positivo disso será refletido na realização de dois educadores, bem como alunos.


**Introduction**

The level of sustainability awareness among computer education students can vary widely. While some students may have a high level of awareness and understanding of sustainability issues, others may have limited knowledge or awareness in this area. Sustainability education and awareness may be included in the curriculum of some computer education programs, exposing students to concepts such as energy efficiency, electronic waste management, and the environmental impact of technology. However, the extent and depth of sustainability education can vary across institutions and programs.

Furthermore, students’ individual interests and engagement with sustainability topics can also influence their level of awareness. Some students may actively seek out information and resources on sustainability, while others may be less motivated or focused on these issues.

Overall, it is important to recognize that sustainability awareness among computer education students is not uniform and may depend on various factors, including the educational context, curriculum, and individual interests. The level of
sustainability awareness among computer education students is generally increasing, reflecting the growing recognition of the environmental and social impacts of technology. Many educational institutions are incorporating sustainability principles into their computer science and technology curricula to ensure students develop an understanding of the intersection between technology and sustainability. Students are becoming more aware of the importance of sustainable practices in areas such as energy efficiency, responsible e-waste management, and the development of environmentally friendly software and hardware solutions. They are also learning about sustainable design principles, green computing, and the role of technology in addressing global challenges like climate change and resource depletion, by J Boeve-de Pauw (2015).

Various initiatives, organizations, and events focused on sustainability in technology are also contributing to increased awareness among computer education students. These include sustainability-focused hackathons, workshops, and conferences that expose students to sustainable technology projects and ideas. Additionally, the broader societal emphasis on sustainability and environmental stewardship is influencing students’ awareness and motivation to incorporate sustainability into their computer education. Many students are recognizing the need for sustainable practices and are actively seeking knowledge, resources, and opportunities to contribute to a more sustainable future through their technological expertise by (Sofia Lundmark, and Romina Rodela, 2023).

While the level of sustainability awareness among computer education students is generally on the rise, there may still be variation among individuals and educational institutions. It is important for educators and institutions to continue promoting sustainability education and providing opportunities for students to engage with sustainable technology concepts and practices.

1. Do computer education students receive specific training or coursework on sustainable practices in technology?
2. Do computer education students understand the role of technology in addressing global sustainability challenges?
3. Are computer education students aware of sustainable design principles in software and hardware development?
4. Are computer education students aware of the life cycle of electronic devices and the importance of responsible disposal?
5. Have computer education students been involved in sustainability-related projects or initiatives, either within their academic programs or through extracurricular activities?

From another side, humans are naturally social. Thus, communication is essential to life. Communication is multivocal. Thus, a thorough literature review reveals divergent or convergent views of the focused topic. "Communication" defines the concept. Communication is a structured procedure. This is an action or series of actions. Sür and Delice (2016) define communication as the purposeful or unintended transmission of thoughts and emotions. It’s thought to mean everything. In personal and professional settings, accurate communication is essential. However, this method helps people communicate and resolve concerns. Ineffective communication can lead to unhappiness, social alienation, loneliness, and failure.

Communicators must be skilled. Effective educator-student contact is essential to the educational process, which entails communication. According to Aksungur (2018), teachers should have a positive attitude, actively listen to students without interrupting, provide constructive feedback while listening, effectively convey information, use clear and comprehensible language, and respect diverse ideas. According to Pehlivan (2005), effective educators use proper language, clear and comprehensible expressions, impartiality, appropriate terminology, expertise in the relevant field, appropriate physical settings, tolerance and empathy, affection for students and the profession, amicability, and appropriate nonverbal cues. Thus, integrating students within a framework, improving teaching, and encouraging desired behaviors can boost academic performance. Inadequate teacher-student communication can cause students to disengage from class, hindering their academic development.
Literature Review

Despite the variety of communication options available today, it appears that international pupils are not given enough attention, particularly in primary education. Thus, many teachers cannot fully employ their communication talents with students. Incomprehensible student language can cause noise pollution, inhibiting dialogue. Since elementary education is the foundation of the education system, pupils should feel attached to their school, education, and teachers. Unfortunately, many educators don’t comprehend or ignore communication’s essentials. Intercultural differences can cause several problems. Cultural differences can be difficult to understand and interpret for people from different origins. Misunderstandings may result. According to Yeşil (2009), the challenges of communication and adaptation stem from the cultural disparities that arise as a result of multiculturalism.

Despite the plethora of communication opportunities in modern times, international students are not given enough attention, especially in basic school, which is the cornerstone of education. Thus, many teachers struggle to communicate with their students. Incomprehensible student language can cause noise pollution, inhibiting dialogue. Since this stage is the foundation of education, pupils should feel attached to their school, education, and teachers. Unfortunately, many educators are unaware of or ignore communication-enhancing factors. Ignoring intercultural differences causes many problems. Cultural differences might lead to misunderstandings for people from different origins. According to Yeşil (2009), the challenges of adapting to a multicultural society arise from the resulting variations in people’s ways of thinking, speaking, and acting.

Many intellectuals have studied communication. This work theoretically analyzes many communication models and chooses the Shannon-Weaver Communication Model. The chosen model includes essential communication aspects. Its comprehensive view of communication makes it suitable for theoretical
classroom communication analysis. Shannon and Weaver proposed the linear model of communication.

**Method of the model**

The present investigation has been structured utilizing a project investigation style, the qualitative research approach. A approach under consideration is delineated like the process of identifying and evaluating the prevailing issues within a constrained framework (Merriam & Tisdell, 2015). Furthermore, the study was designed utilizing the phenomenological approach, with the objective of conducting a comprehensive investigation of a particular phenomenon. Phenomenological methodologies center on the elucidation of how the definition and expression of an individual’s or group’s experience is established (Dec 21, 2020 — Patton,). Hence, the present study is grounded on the inquiry into an experience to a applicants involved include a process of interaction within a classroom setting.

A. **Group of Study**

Students and teachers of Syrian immigrant background attending elementary schools in Gaziantep as well as Hatay provinces are the subjects of this study. Criterion sampling was used to choose the participants. When using a criterion sampling strategy, cases are picked at random based on how well they fit a set of criteria developed in advance. According to Teddlie and Yu (2007), researchers have the option of either organizing the aforementioned criteria themselves or using sample criteria. Participants were selected based on their meeting three criteria: they had to be Syrian immigrants, they had to be willing to volunteer for the research project, and they had to be easily accessible. In addition, teachers were selected according to three criteria: availability, willingness to volunteer, and the presence of Syrian immigrant students at the schools where participants are employed. Twenty-two Syrian students and fifteen teachers from elementary schools in Gaziantep and Hatay provinces make up the sample for this investigation. When
illustrating responses from respondents' points of view, the letters (T) and (S) were used to code for the teacher and student, respectively.

B. Application and Data Aggregation Instrument

In order to extract the participants' perspectives, semi-structured interviews were used to establish the study's methodology. The questionnaire was created after a thorough review of the literature and consultation with two academic experts: a specialist in educational administration and supervision and an expert in assessment and evaluation, who provided feedback on the content of the questions. An expert in language comprehension examined the clarity of the queries. Subsequently, a pilot study was conducted to assess the content of the interview questions, and the interview method was modified slightly. This study employed semi-structured interviews, which allow for greater latitude of inquiry than their more rigid counterparts. As noted by Karasar (2020), researchers may pose a series of leading questions followed by follow-up questions or sub-questions to steer the topic in a new direction during an interview. Before initiating the project, we conferred with the Near East University Research Ethics Committee and obtained an ethics report for the data collection technology we intended to implement. The research was initiated after obtaining the essential permissions to conduct interviews from the Ministry of National Education. At the outset of the study, participants were made aware that their participation was entirely voluntary, and they were provided with a written informed consent form in which it was made clear that the data collected would be used exclusively for the purposes of this research and that the research would adhere to the principles of confidentiality. After receiving approval from the participants, 45 to 50 minutes of audio recordings were made during the interview and then transcribed verbatim, without any changes to the original recordings.

C. Data Analysis

The examination of the data obtained from the in-person interviews was conducted through both manual means and the utilization of the NVivo R1 software. Thus, the coherence of the derived codes, categories, as well as themes was also
subjected to verification. An acquired data was inputted into the designated software and subsequently analyzed to determine the frequency distribution of responses provided by the participants in response to the posed inquiries. Consequently, the data that has undergone processing is exhibited in tabular form to facilitate comprehension and analysis.

Results

Initial Goal

Assessment of Results for the 1st Sub-Goal

Fig 1 (a,b) displays the responses provided by educators regarding the attitudes, behaviors, and reactions of Turkish pupils towards their Syrian immigrant counterparts. Upon examining the viewpoints of the educators regarding the topic, as presented in Fig 1 (a,b), it becomes apparent that the prevailing emphasis is on the subject of "Exclusion". Regarding the aforementioned inquiry, three participants expressed the theme of "There exists no issue among students." Two participants each conveyed the themes of "Discrimination and Compliance Issues," "Conflict and Aggression," "Communication-Induced Reactions," and "Reactive Behaviors." The motif of "aversion to communication" was likewise alluded to by a solitary individual. Comments pertaining to the aforementioned inquiry are presented as follows:

The inclusion of Syrian students is not desired by them. (T, 5) The Turkish students in our classroom exhibit no discernible negative attitude, behavior, or reaction towards their Syrian peers. (T, 10) The present immigration situation has led to a proclivity for conflict among them. (T, 12)

Upon examining the overall outcomes, it has been revealed that Turkish students tend to ostracize immigrant students, leading to conflicts arising from inadequate communication. Gender's (2017) study found that immigrant students...
face challenges and experience exclusion primarily due to factors such as the school’s climate, environment, and differences in language and curriculum.

Fig 1.(a): The present study examines the attitudes, behaviors, and reactions towards Syrian migrant students

Fig 1.(b): The present study examines the attitudes, behaviors, and reactions towards Syrian migrant students
Assessment of Results for the 2nd Sub-Goal

Fig 2 (a,b) displays the responses provided in relation to the impact of a compliance issue between students from divergent cultures on the academic achievement of immigrant students. Upon analyzing the viewpoints of educators regarding the topic, Fig 2 (a,b) reveals that approximately 50% of them conveyed the notion that it has an adverse impact. Furthermore, seven participants expressed the theme of "difficulty in adaptation". The themes of "absence of problem observation," "language learning difficulty," "communication problem," and "reluctance to attend school" were each expressed by a sole individual. The following comments pertaining to the aforementioned inquiry are presented as examples: It is my belief that the academic accomplishments of the individuals in question were adversely impacted by the cultural differences between them. (T, 15). The adverse impact on them notwithstanding, the primary cause of the issues appears to stem from the unfamiliarity of immigrant families with the Turkish National Education system and its educational paradigm. (T, 6). The presence of cultural disparities between the two nations has resulted in challenges with regard to adherence. (T, 1).

Lecturer Opinion (N)

Fig 2.(a): The impact of adjustment difficulties on the academic performance of students who have migrated
Fig 2.(b): The impact of adjustment difficulties on the academic performance of students who have migrated

Greene’s (1998) research findings suggest that foreign children tend to perform poorly in academic tests due to their limited proficiency in the foreign language, which is a result of their exposure to a different cultural environment. Consequently, these children experience academic difficulties and are unable to achieve academic success. Similarly, Çelik (2018) found that academic underachievement was prevalent among Syrian immigrant students due to challenges encountered in comprehending course content.

Assessment of Results for the 3rd Sub-Goal

Fig.3(a,b) displays the responses provided by educators to the inquiry regarding the communication-related challenges encountered with immigrant pupils in the academic setting. Upon analyzing the responses of the participants as presented in Fig 3 (a,b), it is evident that the predominant focus of their opinions pertains to the theme of "complete unfamiliarity with the Turkish language." Three participants articulated the themes of "Cultural Difference" and "Absence of Challenges". Furthermore, two participants identified the themes of "Non-Compliance to the Order," "Ignorance and lack of attention," and "Lifestyle
difference" through underlining. The themes of "Shyness in behavior", "Lack of empathy", and "Unwillingness to share personal problems" were each underscored by a solitary participant. The following are a selection of viewpoints expressed by certain participants.

The individuals in question exhibit a lack of ability to articulate their thoughts and comprehension of the Turkish language, rendering them unable to comprehend the statements made by Turkish students. This statement highlights the existence of issues or challenges. The presence of a language barrier can be attributed to the cultural and educational disparities that exist between Syria and Turkey, resulting in a breakdown in communication. (T, 7). The classroom lacks a sense of structure and organization for children, leading to a difficulty in their adherence to established norms and regulations. (T, 4).

Based on the feedback provided by the participants, it was generally observed that immigrant students exhibited limited proficiency in Turkish language, manifested shyness due to cultural and linguistic disparities, demonstrated non-compliance with established norms, lacked empathy, and faced challenges in expressing their grievances. In contrast to the present study's results, Seymen and Tok's (2015) research revealed that non-native Turkish learners who are foreign students possess an advantageous position in their language acquisition process due to their familiarity with the target culture.
Lecturer Opinions (N)

![Bar chart showing lecturer opinions on communication challenges](image)

**Fig 3. (a): Challenges Arising from Communication Issues**

Lecturer Opinions %

![Bar chart showing lecturer opinions as percentages](image)

**Fig 3. (b): Challenges Arising from Communication Issues**

**Secondary Goal**

**Assessment of Results for the 1st Sub-Goal**

Fig 4. (a,b) displays the responses provided by the participants when asked to identify the challenges associated with residing in Turkey. Upon analyzing the opinions of the students regarding the subject matter, as presented in Fig 4. (a,b), it
becomes evident that a significant proportion of them emphasize the challenge of acquiring proficiency in Turkish language, effective communication, and comprehension of the course material. However, with regards to the aforementioned inquiry, five participants expressed the theme of "non-experiencing of any difficulties." Three participants conveyed the theme of "the cost of living," while two participants each emphasized the theme of "challenges with Turkish students." The themes of "Shopping", "Tradition Difference", "I Have Problems with Everything", "There is Too Much Theft", and "Violence by Students" were each mentioned by a sole individual. Several perspectives were expressed by the participants with Fig 4. (a,b).

The sole predicament that I encounter pertains to my inability to utilize the Turkish language, which consequently hinders my ability to effectively communicate with individuals. (P, 8). I do not encounter any challenges in this context. (P, 20). The author perceives the challenges encountered in their current living situation as a form of expenditure required to sustain their livelihood. (P, 9).

The majority of students reported encountering challenges in comprehending Turkish language and grasping the course content. Additionally, they faced obstacles in navigating local markets, adapting to cultural disparities, experiencing peer aggression, and encountering instances of theft. Several students reported that they did not encounter any difficulties. Güngör and Şenel (2018) have noted that language and cultural disparities can lead to difficulties in comprehending the curriculum, resulting in academic underachievement. This is attributed to the inability to grasp the language, leading to a mismatch between the curriculum and the student's understanding.
Assessment of Results for the 2\textsuperscript{nd} Sub-Goal

The responses provided by the participants regarding the inquiry "Are there any similarities between the lifestyles observed in Turkey and those observed in Syria?" Fig 5. (a,b) displays the inquiry regarding the existence of cultural harmony between the two nations. Fig 5. (a,b) illustrates that the students’ perspectives on
the aforementioned inquiry are characterized by two divergent themes: "We possess dissimilar cultural and lifestyle backgrounds" and "There exists no disparity." Four participants also conveyed the theme of "superiority of lifestyle in their respective countries." Furthermore, it is noteworthy that the themes of "We experience feelings of loneliness due to the absence of our relatives", "I am uncertain" and "Gender equality is prevalent in Turkey" were each referenced by a sole individual. Several viewpoints regarding this inquiry were expressed by the participants.

Cultural and lifestyle disparities exist between us. (P, 7) Based on my perception, I posit that there are no discernible distinctions between my country of origin and the current location. (P, 16). The individual expressed that their quality of life was favorable in Syria, whereas their current living conditions in Turkey are comparatively inferior. (S, 3).

The aforementioned participant statements indicate that immigrant students commonly encounter challenges in assimilating into Turkish society, primarily due to disparities in cultural norms, linguistic practices, and ways of life. Conversely, notwithstanding the aforementioned dissimilarities, a subset of the participants expressed the view that no distinction existed. Upon review of the literature (Güngor & enel, 2018) ; and (Levent & ayak, 2018), it is evident that Syrian migrant scholars frequently face difficulties assimilating into Turkish society due to their lifestyle differences.
Assessment of Results for the 3rd Sub-Goal

Fig 6. (a,b) presents the viewpoints of students pertaining to communication-related challenges encountered as a “immigrant student” within the classroom setting. Upon examination of the opinions of the students regarding the subject matter, Fig 6. (a,b) reveals that over 50% of them placed emphasis on the theme of
"Language problem." Four participants expressed the theme of "Behaviors" in relation to the question at hand. Two participants expressed the theme of "There is no problem," while one participant each mentioned the themes of "Fight," "They do not like Syrians," and "Transportation problems." Several perspectives on this inquiry were expressed by the participants.

The behavior of my teachers and fellow students in the school has a negative impact on me. (S, 18). The individual expresses difficulty comprehending the Turkish language during instructional sessions. (S, 5).

As per the assertions made by the respondents, it has come to light that students, in particular, encounter significant challenges due to their incomplete comprehension of the Turkish language, which ultimately poses as the most prominent obstacle to their academic pursuits. Kirmayer et al. (2011) conducted research which found that language difficulties had a detrimental impact on the mental health of international students. The research conducted by Alagöz and Geçgil (2016) reveals that the primary challenge encountered by refugee students is language barriers. Uzun and Tüm (2016) found that foreign students encounter significant challenges in academic settings due to their limited proficiency in Turkish, which impedes their ability to effectively communicate with peers and instructors, ultimately leading to dissatisfaction with their educational experience.
Conclusion

Turkey is a country that undergoes a consistent inflow of immigrants due to its strategic geographical position. It is significant to note that Syrian immigrants represent the most substantial demographic within the migrant population residing...
in the nation. Consequently, Turkey is encountering certain challenges pertaining to the influx of immigrants it has accommodated. Arguably, the most paramount among these issues is education. The findings of this study indicate that primary school Syrian immigrant students in Gaziantep and Hatay encounter significant academic and social challenges, including language barriers, communication difficulties, social exclusion, discrimination, and a lack of sense of belonging. Overall, it is widely acknowledged that teachers possess inadequate knowledge regarding these students and are provided with insufficient assistance to enhance their understanding or instruct them on this matter. It was comprehended that certain empathetic educators offered supplementary assistance to these pupils within their instructional spaces by relinquishing their allotted time, and the pupils expressed contentment with their instructors as a result of this disposition. It has come to light that these students perceive their educational opportunities as inadequate and express dissatisfaction with them. The findings of the study indicate that recommendations can be proposed to enhance language instruction for these pupils, to cater to their needs by fostering greater engagement with their families, and to prioritize social activities and guidance education as a means of addressing language and communication difficulties.

REFERENCES


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