

Project Report

Integrating information literacy in multicultural education: the "Pyxida" example.

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Abstract

Like other European nations, Greece has experienced a substantial influx of refugees, immigrants, and migrants in recent years. Primary schools, secondary schools, and libraries serve as information centres that can play a critical role in the socio-economic integration of these populations. This is achievable through collaborative information literacy (IL) programmes involving teachers and librarians, focusing on multicultural education. IL plays a vital role in empowering migrants and refugees, as it not only enhances their academic success but also equips them with the skills necessary to integrate into new communities and make informed decisions.

In this context, this article discusses the implementation of an IL programme for immigrant and refugee children of the Intercultural Center "Pyxida". The two-month programme aimed to integrate IL into Greek literature lessons using the Big6Skills model. It aimed to improve students' Greek language abilities, assess their educational levels, and promote critical thinking. In collaboration with Pyxida's coordinators, the librarian facilitated lessons that included

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grammar and syntax exercises, dictation, comprehension questions, paraphrasing tasks, and debates. The research question that arises is whether the collaboration between coordinators and librarians could empower cognitive skills of displaced students through the implementation of an IL course.

The results indicate that students improved their critical thinking skills and expressed a desire for the programme's continuation. The findings suggest that IL programmes can be effectively integrated into multicultural education, particularly benefiting immigrant and refugee students in terms of social inclusion.

Keywords

collaboration; critical thinking; immigrant and refugee integration; information literacy; information literacy model; multicultural education; secondary education; teacher librarian

1. Introduction

By late 2019, a staggering 79.5 million individuals — about 1% of the global population — were forcibly displaced, according to a report by the United Nations High Commission for Refugees (UNHCR, 2019). This number is anticipated to rise further due to the growing complexity of various crises, such as wars, famine, pandemics, climate change, and economic instability. Therefore, it is now vital to establish and implement long-term solutions for refugees and immigrants. Education is vital for assisting displaced populations in transitioning smoothly to their host countries (Wiseman et al. 2016). Beyond fostering academic progress, education is an essential tool for social integration, helping young people in transition become active and productive members of their new communities (Beirens et al. 2007). However, many education systems and teachers are not sufficiently prepared to address the unique needs and challenges associated with the global movement of people. Secondary education institutions face significant challenges in designing curricula for these students, such as language barriers, cultural differences, and limited familiarity with the educational system. These factors hinder individuals' ability to navigate and assess information effectively, creating obstacles to their academic success. Implementing information literacy (IL) models designed to address these students' needs can significantly mitigate these obstacles.

In this context, this article presents a brief literature review on IL models that have been integrated into secondary education curricula and explores how these models could be combined with multicultural educational programmes. Following this review, this paper focuses on an IL programme implemented at the Greek Council for Refugees - Intercultural Center "Pyxida, during the summer of 2022. The centre serves as a hub for displaced families, offering educational support and community engagement activities. The programme was specifically designed for secondary education students (aged 12 to 16), integrating Greek literature as a means of language acquisition while using the Big6Skills model to enhance their critical thinking. The methodology, results, and conclusions from this initiative provide insights on integrating effectively IL into language learning for students in transition.

2. Literature Review

While there is no universally accepted "multicultural educational model" applicable to all educational contexts, numerous scholars and educators have contributed to developing

frameworks promoting multicultural education. For example, according to Banks (2016), multicultural education has three aspects: strengthening school culture, pedagogy of equality, and lowering prejudice. This model emphasises the integration of various perspectives throughout the educational process. Sleeter and Grant (2009) outline five methods of multicultural education: the social reconstruction approach, the additive approach, the transformational approach, the social action approach, and the contribution approach. Every approach reflects a distinct mindset of handling diversity in the curriculum. Also, Bennett's (2017) Developmental Model of Intercultural Sensitivity (DMIS) describes six stages of multiculturalism, ranging from Denial to Integration. This model is particularly important for understanding how individuals perceive and respond to cultural differences. Gay (2002) highlights the importance of teaching cultural responsiveness by incorporating cultural diversity into teaching strategies. This model creates a learning environment that respects and embraces diverse cultural perspectives.

Furthermore, Ladson-Billings (1995) presents a framework for culturally immersive learning pedagogy, highlighting the need for educational practices linked to students' cultural backgrounds, experiences, and ways of learning. Reed, et al. propose a model for the multicultural transformation of school curricula (2007), focusing on the redesign of their content and on teaching strategies and assessment methods, with a holistic student-centred approach concerning different cultural perspectives. These models enhance multicultural education by providing cutting-edge resources for the continued development of specialised curricula, effective teaching techniques, and the overarching objective of fostering inclusive learning environments. These approaches could be used by organisations such as schools, universities, and libraries to advance social equality and multicultural awareness in the classroom and society in general.

IL becomes even more imperative in multicultural education, as students engage with diverse cultures and information sources. The following review briefly describes various IL models implemented in multicultural education, examining their effectiveness and consequences for fostering cultural competence among students. Eisenberg and Berkowitz's (1996) Big6Skills model emphasises the importance of information skills, including task definition, information-seeking strategies, location and access, use of information, synthesis, and evaluation. It is a well-established framework for teaching information and technology skills, because its six stages provide a structured approach to problem-solving in any information-based task. While the model is typically employed in academic and library settings, it has been adapted for various educational contexts, including multicultural and language-learning environments. Using Big6Skills in language learning allows students to systematically approach information tasks, which can enhance both linguistic proficiency and critical thinking. For immigrant students, particularly those with limited exposure to structured educational environments, the Big6Skills model provides a scaffolded approach to learning that breaks down complex tasks into manageable steps. Its application in multicultural education facilitates the development of critical thinking and cross-cultural understanding. Guided Inquiry Design (Kuhlthau et al., 2012) encourages self-directed learning by incorporating IL into the investigation process. The model fosters a deeper understanding of multicultural issues by supporting students in investigating various information sources and perspectives. In addition, Foster (2018) proposes a cultural competence and IL integration model, which underscores the importance of understanding cultural context when seeking, evaluating, and using information. Through this model librarians can improve their cultural competence by self-assessment processes examining their own

biases, beliefs, and assumptions to understand how these may impact student interactions and learning. Moreover, they could use diverse teaching methods, such as discussions, visual aids, hands-on activities, to cater to different cultural learning styles and preferences. Finally, through reflection and feedback, librarians engage in critical reflection after teaching sessions, using assessment results and student feedback to identify gaps and adjust teaching strategies accordingly.

Critical literacy as a concept examined by Gregory and Higgins (2017), provides students with the tools to critically analyse information, thus allowing independent thinking and decision-making skills. Simultaneously, it fosters an awareness of social-justice issues, enabling students to understand their relationship to the information ecosystem and its effects on society as they grow in navigating complex areas of information so that they can better assess sources and participate more broadly in diverse points of view. Similar to this in philosophy is the lack of explicitly stating IL "skills". The Association of College and Research Libraries (ACRL, 2016) provides an example with their ACRL Framework for Information Literacy for Higher Education that emphasises core concepts like information creation as a process and research as inquiry. This framework allows flexibility to multicultural education settings and highlights the importance of being contextually informed.

In conclusion, the different models provided for multicultural education and IL can provide a broad base of knowledge to foster the development of cultural competence in schools, while enhancing critical thinking skills. Teachers and librarians through implementing these approaches into their pedagogy, may be able to provide social inclusion for displaced children.

3. The "Pyxida" IL project

As part of a doctoral thesis on "Information Literacy and Multicultural Education," a two-month voluntary IL programme, was conducted at the intercultural centre "Pyxida", a non-governmental organisation established in 1996 in response to displaced families experiencing social isolation. Pyxida employs a multidisciplinary team dedicated to addressing the diverse needs of individuals and families, with services focusing on social support, employment assistance (through the Cosmos Employment Hub), and education. Responding to the educational needs of displaced individuals, Pyxida offers Greek language courses for adults of all proficiency levels, supported by original digital teaching materials accessible through an educational platform. Additionally, primary and secondary students and unaccompanied minors from Attica's Accommodation Hub Centres attend specialised classes designed to provide remedial education. To support language acquisition, education, and leisure, Pyxida maintains a lending library of over 1,000 titles in Greek and several foreign languages, available free of charge to beneficiaries and visitors alike.

3.1 Project Objectives

The primary goal of the project was to implement an IL programme to support language acquisition and critical thinking among immigrant and refugee students through Greek literature. The programme sought to enhance the students' IL skills using the Big6Skills model, while improving Greek language proficiency, specifically in grammar, syntax, comprehension, and paraphrasing. Additionally, tasks encouraged critical thinking through discussion and debates on contemporary issues. The librarian assessed the students' educational level and adapted

teaching strategies to foster a sense of community and engagement, by providing those children with a structured and supportive learning environment.

This task was challenging because the librarian worked with children who have suffered both psychologically and physically, having experienced traumatising circumstances. Therefore, consideration of each child's socio-cultural background was essential for the librarian to gain students' trust and create a warm, encouraging learning environment.

3.2 Project identity and structure

The voluntary activity took place over two months, from mid-July to the end of September 2022, at the intercultural centre Pyxida, with daily 90-minute sessions from 10:00 a.m. to 4:00 p.m., excluding weekends. Fifteen children aged 12 to 16 participated in this bilingual IL programme, with instruction in Greek and English. Attendance was optional, leading to diverse participation levels. Initial assessments noted significant learning heterogeneity due to participants' varying educational backgrounds: some had been in Greece for two to three years, while others had arrived recently.

Coordinators divided participants into three groups by age and cognitive background. Two groups were beginners, while one served intermediate students. The children originated from Iran, Egypt, Syria, and the Gulf countries, with three additional children from Ukraine joining in the final ten days. As these late arrivals came near the end, they were excluded from final assessments.

3.3 Project methodology

The programme was structured around daily lessons that integrated IL and Greek language learning. Each session followed the Big6Skills framework, where students were guided through the six stages of information problem-solving.

During the first meeting, there was a basic discussion about the need for libraries in schools and how those children perceive "library" both as a concept and as a range of services provided. Only two out of fifteen have visited a library in their countries. Thereafter, they were asked whether they enjoy reading books rather than using the internet. The majority (13 out of 15) claimed that they prefer internet navigation to reading. However, two claimed that they enjoy reading, describing libraries as "*places that provide tranquillity and have thousands of books that could transport readers to worlds, either real or imaginary*". The primary literary resource used in the programme was Georges Sari's "*The Treasure of Vagia*", a well-known Greek children's book. The text was chosen for its accessibility, cultural relevance, and potential for stimulating critical thinking. Supplementary materials included grammar and syntax worksheets, dictation exercises, and comprehension questions based on the book.

The Big6Skills model's initial stage, Task Definition, helped students pinpoint the main goals and information needs for their reading tasks. This required them to distinguish between essential and non-essential elements in the text, engaging in preliminary critical thinking. Students were prompted to articulate their learning goals, such as understanding central themes, analysing characters, and spotting unfamiliar words.

In the Information-Seeking Strategies phase, students were guided in developing effective approaches to understanding the novel. This included using dictionaries to decode unfamiliar

words, consulting grammar guides to navigate complex syntax, and referring to previous chapters to establish continuity. In addition, they learned to do searches with Boolean operators in online resources, and to take their search from broader to narrower terms. However, when the librarian asked for words from the book related to the summer season, she observed that while some students were able to identify some, such as "*swimsuit*" and "*heat*," they had difficulty understanding that the word "*island*" is not exclusively indicative of the summer season. Thus, the librarian gave the following example: '*Due to heavy snowfall, sailing from the port of the island of Aegina was prohibited*'.

The Location and Access phase focused on helping students navigate the structure of the book itself, zeroing in on specific parts to study. The librarian gave them questions that ranged from simple fact-checking to deeper dives into characters' interactions. This stage played a key role in developing students' ability to skim, scan, and select relevant information — skills foundational to effective IL and critical thinking.

During the Use of Information phase, students read, paraphrased, and answered comprehension questions to dig into the text. The paraphrasing exercises encouraged cognitive flexibility as students had to interpret the core meaning and express it in their own words. This reinforced their understanding of Greek language while also developing higher-order thinking skills.

The fifth phase, Synthesis, was a key component of the programme, as it required students to organise information and present it in a coherent manner. This is manifested through activities like summarising plot points, making connections between different sections of the text, and participating in group discussions. The synthesis process was further enhanced through debates on topics like "new technologies", "climate change", and "friendship" — themes that were tied to the book's narrative. In the "new technologies" debate, students were asked to relate tradition and progress in "*The Treasure of Vagia*" to contemporary discussions about the impact of new technologies. This exercise encouraged them to counter the fictional story with real-world issues, evaluating the benefits and drawbacks of technological change. Similarly, the climate change debate prompted students to analyse the environmental motifs in the book and connect them to the global climate crisis, fostering critical thinking about human responsibility for environmental stewardship. The friendship debate allowed students to integrate the book's portrayal of interpersonal dynamics with their own experiences and societal expectations regarding ethical decision-making in social relationships. By constructing arguments about the qualities that define a true friendship, students practiced organising their thoughts coherently and engaging in evaluative thinking. Throughout these debates, students were asked to document their opinions using online resources, while the librarian pointed out the ways in which a website is considered accurate and credible, and ways to avoid fake news, such as assessing the author's real name, the website's publisher, and the reliability of online sources. Students were also introduced to proper citation practices, learning that citing sources is not merely a formal requirement, but an ethical imperative in the responsible use of information.

The final stage of the Big6Skills model, Evaluation, involved both formal assessments, such as comprehension tests and dictation exercises, as well as informal reflections during class discussions. This reflective practice encouraged students to think critically about the effectiveness of their information-seeking strategies and the ways in which they engaged with the text, promoting metacognitive awareness - a key aspect of critical thinking.

In addition to the literary analysis and debates, the librarian also introduced students to the organisational structure of a library, explaining the Dewey Decimal Classification System and the significance of call numbers. This aspect piqued the students' interest, although it was admittedly more complex.

During the project, there was ongoing collaboration and communication between the librarian and the lead coordinators of Pyxida to monitor student progress and make necessary adjustments. For example, students who demonstrated a higher level of proficiency were moved to more advanced groups, while those struggling were provided additional support. The overarching goal of this IL programme was to develop the cognitive skills and critical thinking of displaced students through the Big6Skills model, emphasising that learning and education are lifelong processes, not static achievements. By integrating language acquisition with the cultivation of IL and critical thinking, the programme aimed to empower students to become active and responsible learners, while at the same time feel more confident to support daily issues.

The synthesis of literary analysis and real-world issues was a crucial component of this approach, as it allowed students to critically engage with both the fictional and factual dimensions of the topics explored. This form of integration is a key aspect of critical thinking, as it requires learners to reflect on diverse sources of information and form reasoned judgments. Overall, the IL programme at the Pyxida Intercultural Centre demonstrated the potential of using culturally significant literary work as a springboard for developing essential skills in language, IL, and critical thinking. By guiding students through the structured Big6Skills framework, the librarian and coordinators were able to foster a learning environment that cultivated intellectual curiosity, evaluative thinking, and a deeper appreciation for the responsible use of information.

4. Conclusions

Initially, regarding the results of implementing the Big6 skills IL model, the librarian realised that spoken language prevails over written. In other words, the children preferred to provide oral responses rather than record them. When called upon to write down their answers, the morphology of these responses maintained the succinctness of oral discourse rather than the technical elaboration and embellishment of written text.

It should be noted that time was not sufficient to undertake additional activities. The librarian aimed to conduct a final interdisciplinary research project involving the fields of geography and history related to Aegina (with Sari's book as a focal point, where the specific island played a central role in the plot). On the one hand, the study would encompass the local products, and on the other hand, it would focus on Ioannis Kapodistrias, the first governor of Greece (as there is a reference to the book). For instance, how Kapodistrias stood up for Aegina's local products and his political supporting decisions.

However, feedback from the children regarding this IL project was more than positive. They expressed a desire for continuity during the upcoming school year, something that, from the perspective of the librarian, was extremely challenging due to professional commitments. Children were eager and willing to learn; one student mentioned that she prefers coming to the intercultural centre rather than going to school because her classroom *"had no windows, and all the children were crowded around two desks since the walls of the room were ready to peel off"*.

The results of implementing such a collaborative model are diverse. One is that students could interact with real literature and literary criticism books included in libraries. In addition, they could recognise a document's identity, evaluate it, and manage the information provided in print sources and online before reading it. Moreover, they can become aware of the intellectual and cognitive processes, the specific language, style, and breadth of knowledge required for the above task. Finally, they can be encouraged to engage in a critical evaluation process of their readings and complete reading logs for their school assessments (Kopsida-Vrettou, 2011). Overall, the collaboration between the librarian as a volunteer and the coordinators of the multicultural centre Pyxida was very positive. Information specialists should be more open to collaborations with such organisations; the mindset of social inclusion should prevail. There are no restrictions or biases for anyone; every library should embrace everyone, be open to everyone, and be willing to assist any community and any underserved individual.

Declarations

Ethics approval

Ethical review was not considered necessary in alignment with Intercultural Center 'Pyxida' guidance on the conduct of ethical research.

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AI-generated content

Chat-GPT was used during the preparation of this work to proofread the manuscript for improving the readability of the text in terms of sentence consistency, proper wording and native English language correctness.

References

- Association of College & Research Libraries. (2016). [*Framework for information literacy for higher education*](#). American Library Association.
- Banks, J. A. (2016). *Cultural diversity and education: Foundations, curriculum, and teaching*. Routledge.
- Beirens, H., Hughes, N., Hek, R., & Spicer, N. (2007). [*Preventing social exclusion of refugee and asylum-seeking children: Building new networks*](#). *Social Policy and Society*, 6(2), 219–229.
- Bennett, M. J. (2017). Developmental model of intercultural sensitivity. In Y.Y. Kim (Ed.), *The international encyclopedia of intercultural communication* (pp. 10–20). Wiley.
- Eisenberg, M. B., & Berkowitz, R. E. (1996). *Information problem-solving: The Big Six Skills approach to library and information skills instruction*. Ablex Publishing.

- Foster, E. (2018). [Cultural competence in library instruction: A reflective practice approach](#). *Libraries and the Academy*, 18(3), 575–593.
- Gay, G. (2002). [Preparing for culturally responsive teaching](#). *Journal of Teacher Education*, 53(2), 106–116.
- Greek Council for Refugees (n.d.). [Intercultural Center PYXIDA](#).
- Gregory, L., & Higgins, S. (2017). [Critical information literacy in practice: A bibliographic review essay of critical information literacy, critical library pedagogy handbook, and critical literacy for information professionals](#). *Communications in information literacy*, 11(2), 390–403.
- Kopsida-Vrettou, P. (2011). *Filanagnosia ke scholikes vivliothikes: pos paragete to "gegonos" sti scholiki kathimerinotita* [Literacy and school libraries: how 'fact' is produced in everyday school life]. Kastaniotis.
- Kuhlthau, C. C., Maniotes, L. K., & Caspari, A. K. (2012). *Guided inquiry design: A framework for inquiry in your school*. Libraries Unlimited.
- Ladson-Billings, G. (1995). [Toward a theory of culturally relevant pedagogy](#). *American Educational Research Journal*, 32(3), 465–491.
- Reed, D., Bustamante, R., Parker, C., Robles-Pina, R., & Harris, A. J. (2007). A course model for developing culturally proficient school leaders. *Journal of Education and Human Development*, 1(2), 1–11.
- Sleeter, C. E., & Grant, C. A. (2009). *Making choices for multicultural education: Five approaches to race, class, and gender*. John Wiley & Sons.
- UNHCR, The UN Refugee Agency. (2019). [Global trends: forced displacement in 2019](#).
- Wiseman, A. W., Anderson, E., Davidson, P., & Taylor, C.S. (2016). [Building a foundation for reflecting on comparative and international education: A synthesis of published comparative education research](#). *Annual review of comparative and international education 2015*, 28, 3–24.