Honors Students’ Perceptions of a Course Using Project-Based Learning Addressing Multiculturalism Preparing Them to Pay It Forward

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DOI:https://doi.org/10.33496/multicolors0201

Abstract
This study examined perceptions of honor students (N = 30) studying at a college of education in Israel regarding the contribution of a course using project-based learning (PjBL) to their competencies and preparing them to pay it forward. The course aims were to expose students to PjBL in the topic of diversity, plan and carry out community involvement projects, and gain insights for future application. Student were asked to evaluate the course objectives. Research tools comprised a diary and a semi-structured interview. Analysis using grounded theory yielded three categories of student development: cognitive, personal-leadership, and pedagogical competencies. Findings indicate that honors students have acquired cognitive competencies related to knowledge about multiculturalism and children’s rights, as well as problem-solving skills. They have developed personal and leadership competencies such as group management and decision-making, as well as pedagogical competencies gaining a deeper understanding of PjBL and how to apply it. Findings may suggest that honors students have benefited from the combination of ideas on living together using PjBL and preparation for paying it forward. Implications for general teacher education are discussed.

Keywords
Multiculturalism, teacher education, pre-service teachers, student perceptions, project-based learning (PjBL)
1. Introduction

This study examined how a course on multiculturalism and children’s rights, developed as part of the European Commission’s TEMPUS IV project on Lifelong Learning in Applied Fields (LLAF; Sofer & Vidergor, 2017), made a perceived contribution to the students who participated in the course, preparing them to become group leaders of fellow students in a second-semester course. The LLAF consortium of 16 institutions in seven countries collaborated to create curricular reform that promotes lifelong learning in teacher education, health care, and other applied fields (Carneiro & Draxler, 2008). A teacher’s guide was designed using Delors’s (2013) four theoretical “pillars” of education. The study presented here focused on the combination of two pillars: “learning to do” and “learning to live together.” The “learning to do” pillar used project-based and problem-based learning. The “learning to live together” pillar focused on the idea that students should be involved and able to participate actively in the communities in which they are living. The pillar of “learning to live together” was converted into a course within an Honors Student Program that required critical thinking and collaborative work using project-based learning (PjBL) as a key to lifelong learning.

1.1. Project-Based Learning (PjBL)

PjBL is one of the suggested active teaching-learning strategies in the “learning to do” pillar. PjBL is described as a “student-driven, teacher-facilitated approach to learning in which learners pursue knowledge by asking questions that have piqued their natural curiosity” (Bell, 2010, p. 39).

Several studies investigating PjBL in teacher education (Frank & Barzilai, 2004; Papastergiou, 2005; Wilhelm, Sherrod, & Walters, 2008) found benefits among pre-service teachers from different faculties. Frank and Barzilai (2004) aimed to prepare future teachers to teach using PjBL by doing PjBL in a course for science and technology, and found that it increased student learning, knowledge acquisition, motivation, and responsibility. Papastergiou (2005) found that PjBL increased pre-service teachers’ engagement and motivation, and Wilhelm et al. (2008) found that pre-service teachers improved their mathematics understanding. Schaffer, Chen, Zhu, and Oakes (2012) found that PjBL increased college students’ level of perceived self-efficacy, and Strobel and van Barneveld (2009) concluded that PjBL is significantly more effective than traditional instruction to train competent and skilled practitioners and to promote long-term retention of knowledge and skills (p. 55).


When implementing PjBL, teachers and lecturers have to consider the types of projects and processes it may include: research projects, construction projects, and professional work/real-world-context projects. Harmer (2014) suggests that, as described by Patton (2012), are as follows. First, it includes a leading question that motivates the students to organize their work around the key processes and terms of the subject. Second, the work process involves research and construction of the information gathered. Third, the process is managed by the learners, who are responsible for choosing, planning, and controlling the work process. Fourth, the content is authentic and relevant, addressing issues linked to students’ real lives, preferences, and agendas.

Larmer and Mergendoller (2010) added that PjBL requires critical thinking, problem-solving, collaboration, and various forms of communication, often known as “21st-century skills”; it allows some degree of student voice and choice; and it incorporates feedback and revision and results in a publicly presented product or performance.

Huber-Shelly and Maciejowska (2017) recommended and gave examples of different courses developed in higher education institutions focusing on students practicing principles of PjBL themselves: formulating a genuine motivation question that correlates to self-regulated learning; raising real-life issues that require treatment; offering a solution and encompassing the ideas and questions to create a project; asking for (and receiving) assistance from other students and staff members, to improve the project, while documenting the process in academic writing, and, finally, presenting the project in class and on campus.
1.2. Pre-Service Teacher Education and Multicultural Education

Banks and McGee Banks (2012) viewed multicultural education as an idea, a reform movement, and a process which requires basic knowledge and understanding of the importance of diversity and different ways of promoting it through education, aimed at social justice and social involvement. According to Jackson (2013), multicultural education is “transformative.” It has no boundaries and is forever developing. It aims to transform education so that education promotes social justice and educational equity. As Banks (2014) emphasized, multicultural education recognizes the importance of education in making our society more just and equal.

Multicultural educational principles, according to Banks (2014), constantly challenge us to analyze our work environment, our classrooms, and our schools. Milner (2010) claimed that pre-service teachers need to be exposed to important concepts that contribute to teachers’ conceptual repertoires of diversity: color-blindness, cultural conflict, meritocracy, deficit conceptions, and expectations. Vidergor and Sofer (2017) explained that multicultural education is necessary for the 21st century because we live in a global world. The values and behaviors that are intertwined with multicultural education provide the tools for living in this globalized world by promoting mutual understanding and respect between different groups, and strengthening pluralistic values and democratic attitudes and behaviors. Most important, multicultural education provides pre-service teachers the tools for critical thinking that enable them to analyze and act against prejudice, racism, and discrimination.

1.3. Paying It Forward

Social responsibility involves service learning and development of leadership, critical analysis, and reasoning (Vidergor & Sofer, 2017). Vidergor and Sofer (2017) explained that the concept of “service-learning” in higher education has been documented since the early 1990s. This was viewed not as a systematic program but was based on the idea that the student should “give something back” to the community and be involved in it, especially in those fields where students work directly and provide services to people (Bringle & Hatcher, 1996; Giles & Eyler, 1994). Preparing students to be socially responsible and active citizens who are willing to be involved in issues such as promoting social justice, equality, and environmental sustainability is a challenge facing all higher education institutions. Research studies have indicated how many institutions of higher education today are concerned not only with research and teaching but also with social involvement in their surrounding community (Jongbloed, Enders, & Salerno, 2008).

Vidergor and Sofer (2017) posited that this paradigm shift includes moving away from passive modes of education and teaching through frontal lectures to more engaged pedagogical methods aimed at developing social responsibility and leadership among students. They elaborated on innovative new methods of teaching, involving problem and project-based learning) PjBL and PjBL) Harmer; 2014, Savery (2015, and service learning) Jagla, Furco & Strait, 2015, which are aimed at nurturing and strengthening in students such qualities as leadership, critical analysis, and reasoning regarding governance, political power, individual involvement in influencing society, politics, economics, and environmental sustainability, as well as empowering participation in deliberation and action in these areas.

Shneiderman (1998) proposed a three-component philosophy called Relate-Create-Donate: Relate—working on a topic in collaborative teams; Create—developing ambitious projects; and Donate—producing results that are meaningful to someone outside the classroom. Although this model was originally designed for computer education, we adopted it to teach the course, as it better captured the concept of paying it forward, with an elaboration of extending the learning experience into the second semester by having our students take responsibility for teaching other students.

1.4. Pre-Service Honors Student Program in Israel

The students selected for this study were part of an honors program at their academic college of education, where they were studying and training to be teachers. This program is offered at all teacher colleges...
in Israel. Students are accepted based on their high abilities and motivation to become teachers. Accelerated studies enable students to graduate after 3 years (instead of 4), while taking a variety of courses to develop perceptions, thinking skills, and teaching methods in flexible, innovative environments (Klavir, Cohen, Abadi, & Greinfeld, 2009). This unique training program aims to strengthen the educational leadership skills of these students as well as their pedagogical teaching skills.

The honors student program in Israel also includes volunteer work in the community as a requirement and a way to give back to society (Klavir et al., 2009). Using PjBL enables students to develop and guide projects related to multicultural education (Banks & McGee Banks, 2012) at the college and in schools, and thereby develop their leadership skills (Klavir et al., 2009).

1.5. Course Design

Our study investigated how students perceived their participation in a PjBL course related to multiculturalism and children’s rights. We set certain goals to help our students learn how to learn so that they would know how to live together, be involved in their community within their field of expertise, and become lifelong learners personally and professionally. The specific goals of the course were that students would learn about the general framework of project-based learning methodology, plan and carry out community involvement projects related to their professional fields, and gain insights from the projects and be able to apply them in the future.

The piloted course challenged students to address issues related to promoting intercultural relations on campus. It was designed for active learning and doing and thus required them to collaboratively plan and implement a concrete project on campus. The course lasted one semester, during which students were exposed to a variety of topics related to multiculturalism and children’s rights, as well as to the principles of PjBL. The assignment consisted of the application of PjBL principles to designing a relevant project. Projects were presented and implemented in college or at schools, and evaluated via alternative assessment. The course was composed of five modules: introduction to course topic and practice of PjBL, introduction to small-scale practice through a college intervention project, planning and designing small-scale projects, implementing the small-scale projects, and assessment and reflection. For more details, see Sofer and Vidergor (2017).

The course was designed, supervised, and monitored by six academic scholars. One was from the research authority; the second was an expert on curriculum planning and design; the third, an expert in PjBL and active learning processes; the fourth, an expert on multiculturalism; the fifth, an expert in personal communications; and the sixth headed the special pre-service honors student program.

Based on accumulated knowledge, our research question focused on how pre-service teachers from an honors student program perceived the contribution of PjBL in a course on multiculturalism and children’s rights to the development of their competencies to pay it forward.

2. Materials and Methods

2.1. Participants

Participants were 30 (N = 30) second-year students of a special pre-service honors student program at a college of education in Israel. These students were accepted into this program based on their high abilities and motivation, as assessed in entrance exams and interviews. Twenty-five students were Jewish (n = 25) and five were Arab (n = 5; 1 Christian, 2 Muslims, and 2 Druze), a distribution similar to their respective representation in Israel’s population. Twenty students (n = 20) participated in the course in 2015, and 10 students (n = 10) in 2016. The total population of the honors student program during these 2 years was 70 (N = 70). Students’ ages ranged from 20 to 25 years.

This group of second-year pre-service teachers was selected to participate in a first-semester course, “Living Together,” which, in addition to exposing them to the topics of multiculturalism and children’s rights, also aimed to prepare them to lead groups of regular first-year pre-service teachers from the Department of
Early Childhood Education (a class of over 100 students each year) in the second semester. The current study addressed the first-semester courses during the 2016 and 2017 academic years.

2.2 Measures

The students were asked to evaluate the course objectives: in other words, how the course contributed to their knowledge, skills, and competences. Research tools were a diary completed by students after each lesson, and a semistructured interview at the end of the semester course.

The diary included reflections that students submitted in written form after each lesson. Students were asked to record any knowledge acquired and/or insights related to the course.

The semistructured interview included 12 items such as “What have you gained studying in this course?”; “According to your perception, what are the principles of PjBL?”; “In your opinion, what is the relevance of the subjects addressed in the course?”, and “Describe the process of learning in this course and how it differs from other courses.”

The artifacts were measured in two stages, first by assessing students’ work on the project based on predetermined criteria related to four different dimensions—planning, application, reflection, and presentation—adding up to grades ranging from 60 to 100, and then based on grounded categories from interviews and diaries.

2.3 Procedure

The study involved four stages.

Stage 1: Development of the intervention/course. The course was developed by the researchers specifically for the pre-service teachers in this honors student program. It aimed to expose these students to issues of multiculturalism and children’s rights through the pedagogical strategy of PjBL, and to prepare them to lead small groups of first-year students in early-childhood education taking a course on multicultural education.

The course included exposure to issues related to multiculturalism and children’s rights, encounter with PjBL theory and developing group learning processes, planning a project on multiculturalism in small groups, and presentation of project and feedback. The courses for the students in 2016 and 2017 were identical.

Stage 2: Selection of students. The two groups of students from the honors student program (n = 20) and (n = 10) were selected based on their willingness to participate in this course as part of their required volunteer hours, which is mandatory for students in this program.

Stage 3: Development of tools. Tools were developed by the researchers to match the course and it aims. Three qualitative tools were used: a diary, a semistructured interview conducted at the end of the course, and analysis of artifacts. These tools made it possible to obtain relevant information from students regarding their perceptions at two points in time—during the course and at the end of the course. Content validity was examined by the scholar from the Research Authority and by the head of the program.

Stage 4: Collecting data. Students’ diaries were collected after each lesson, in writing or via e-mail (313 diaries in total). Interviews with students (N = 30) were conducted individually at the college in a separate, quiet room. At the beginning of each interview, the study’s purpose, procedure, and anonymity were explained, as well as the request to record the interview. Interviews were recorded (when possible) and transcribed verbatim. Student artifacts (planned, applied, and presented projects) were recorded and analyzed by the scholars responsible for the course.

2.4 Data Analysis

Our study examined pre-service students’ sense-making of their experience with PjBL. To ensure trustworthiness of the data and findings, multiple sources of data collection (i.e., student diaries, interviews, artifacts/projects) were used to help triangulate the data and confirm the findings and interpretations. We also ensured that this was the sole course in which the two groups of students (2016, 2017) were exposed to PjBL. During the intervention course, 313 diary entries (each one page long) were collected from 30 students. At the end of the course, 30 semistructured interviews were performed, and seven projects designed by groups of students were subject to analysis.
Students’ replies to interview questions and diaries were analyzed using grounded theory (Glaser & Strauss, 2017). The research team (consisting of three of the above-mentioned scholars—experts in curriculum planning and design, PjBL, and multiculturalism) met regularly to review individual codes and text and to revise the coding scheme. An initial reading of all data was conducted, and notes were taken to identify emerging categories and themes. On the second and third readings a coding scheme began to emerge, later refined in axial and selective coding. In this phase, chunks of data were read, and a code was created to label the data. In the next two phases, axial and selective coding, the lead author conducted reiterative readings of the data in a nonlinear process, coding words, phrases, and paragraphs into one or multiple codes. Themes and categories were refined, and relationships between categories and subcategories were identified and clarified.

Analysis of the responses yielded the following results: (a) axial coding from the initial (Level I) coding yielded seven Level II categories: knowledge of multiculturalism, knowledge of children’s rights, problem-solving skills, personal characteristics, group management, experiencing PjBL, and leading PjBL; and (b) selective coding yielded three core categories: cognitive competencies, personal-leadership competencies, and pedagogical competencies.

A reliability of 88% was calculated for 40% of the analyzed content, performed by three independent coders (the Research Authority scholar; the head of the program; and the personal communication expert) all of whom are experts in the field of teacher education. Intercoder agreement was calculated as a percentage, as the number of agreed-upon classification of statements out of total number of statements multiplied by 100 (Keeves, 1998). Definitions of problematic criteria were refined, and an additional random sample of that content was categorized to obtain 88% intercoder reliability. Table 1 shows the three levels of analysis of student responses.

Table 1
Examples of the three-level procedure for coding of student responses.

<table>
<thead>
<tr>
<th>Level I codes:</th>
<th>Level II codes:</th>
<th>Level III codes:</th>
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<tbody>
<tr>
<td>Original responses from students</td>
<td>Categories generated from Level I codes</td>
<td>Consistent themes created from Level II codes</td>
</tr>
<tr>
<td>“I learned about multiculturalism”</td>
<td>Knowledge of multiculturalism</td>
<td>Cognitive competencies</td>
</tr>
<tr>
<td>“I learned about multicultural differences”</td>
<td>Knowledge of children’s rights</td>
<td></td>
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<tr>
<td>“I learned about the Declaration of the Rights of the Child”</td>
<td>Problem-solving skills</td>
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<tr>
<td>“I understood that children have rights in different areas”</td>
<td>“I have learned to solve a problem”; “I understood that finding a solution is not enough, I have to devise an action plan to make it happen”</td>
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<tr>
<td>“I understood that I am a moral person”; “ability to develop and upgrade myself”</td>
<td>Personal characteristics</td>
<td>Personal-leadership competencies</td>
</tr>
<tr>
<td>“I experienced conducting processes in the group”</td>
<td>Group management</td>
<td></td>
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<tr>
<td>“I understood that I am good at leading a group”</td>
<td>Experiencing project-based learning</td>
<td></td>
</tr>
<tr>
<td>“I learned to work according to project based learning steps”</td>
<td>Pedagogical competencies</td>
<td></td>
</tr>
<tr>
<td>“I learned that this is a good way of teaching in which you give the students the rod and teach the art of fishing”</td>
<td>Leading project-based learning</td>
<td></td>
</tr>
<tr>
<td>“I know how to direct other students on how to design a product that will be presented to the class”</td>
<td>“I know how to lead them to think about a project or a product”</td>
<td></td>
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</table>
Our memos on the initial stage of analysis and coding yielded the following subcategories: knowledge of multiculturalism, knowledge of children’s rights, knowledge of PjBL, developing personal traits, developing leadership competencies, and understanding how to lead PjBL. Core categories that emerged were cognitive competencies, awareness of personal traits, leadership competencies, and pedagogical competencies. Some subcategories were renamed, refined, and combined to form a core category.

The students’ projects were analyzed in two stages. In the first stage, the analysis was based on the following criteria, each receiving 11 points: planning (teamwork/collaboration; time management; motivation), application (authentic/relevant and creative/original project), actual application in the field (college or school), contribution to the target population (based on predetermined success criteria), reflection (reflective ability and insights), presentation (proficiency and sharing new knowledge), and the overall process. In the second stage, projects were analyzed according to the common grounded categories arising from interviews and diaries to allow for triangulation: cognitive competencies related to the application (authenticity and creativity) and presentation stages (knowledge); personal-leadership competencies, related to the planning (teamwork, time management and motivation) and reflection (personal insights) stages; and pedagogical competencies, represented by actual application in the field.

2.5. Ethics

Students in the program could choose any elective course. Once they selected the PjBL course, they were informed that they would be part of a special course which would prepare them as tutors leading groups of early-childhood education students in the second semester. The second semester of this course was considered part of the volunteering platform to which honors students are committed. Students could withdraw from the PjBL course at its initial stage and seek other opportunities to volunteer. The college and students’ names were kept confidential. Students wrote their reflections anonymously, and their names were omitted from their projects and presentations.

3. Results

Findings relate the experiences of honors students during their studies of a course on multiculturalism and children’s rights using PjBL. The analysis of the data, including interviews and personal diaries, allowed us to develop a complex portrait of their experiences using PjBL, and to uncover aspects of their studies from multiple perspectives. Fig. 1 shows student perceptions by main category and subcategories.
3.1. **Cognitive Competencies**

The first category addresses the cognitive competencies and skills of students. Three subcategories emerged from the analysis: *knowledge and awareness of multiculturalism*, *knowledge of children’s rights*, and *problem-solving skills*.

3.1.1. **Knowledge and awareness of multiculturalism**

Almost all students mentioned gaining new information on multiculturalism in general: “I learned about multiculturalism,” and “I learned about multicultural differences.” Some students related that while working in groups they were exposed to the different cultures represented: “I was exposed to different cultures,” and “I learned about the members of our group who come from different cultures.” A few students elaborated on the multicultural approach: “Multiculturalism is an approach that puts diversity in the center regarding all aspects—gender, race, culture, language, etc. Its main attitude is that all people are different and therefore, they should be treated equally despite their differences.” Other students addressed the issue from the viewpoint of a teacher: “We need to educate our students to understand the meaning of multiculturalism, to respect the other, accept him and enable him to act based on his culture.”

3.1.2. **Knowledge of children’s rights**

Many students stated that they were unfamiliar with children’s rights; as one student phrased this: “I did not know anything about children’s rights before this course, and I am going to be a teacher who will be in contact with children on a regular basis, that is why this subject has given me essential and important knowledge for my future career.” Other students added: “I learned about the Declaration of the Rights of the Child,” and “I understood that children have rights in different areas.” Some students listed the main rights they were exposed to, believing that they were of great importance: “I learned that the child’s rights are: the right to live which includes food, housing and medical care; the right to security which includes protection from mental and physical violence; and the right to belong to a country and have citizenship, and to a family that will provide for his needs; and the right to develop and fulfill his personal potential,” and “I learned the importance of the right to belong to a country, and when the family cannot be responsible for that, there is a higher authority responsible for them.”

Some students shared the understanding that children’s rights are culture-dependent: “I learned that there are principles that are perceived as significant for the child in one culture and are perceived differently in another—that they are culture-dependent”; and they expressed their contentment upon realizing that it was addressed by numerous writers and artists: “I was happy to see that children’s rights are addressed in many songs and poems, and many writers deal with them.”

Analysis of the projects showed that most students acquired high proficiency and shared new knowledge acquired during their work on them. Two groups showed average proficiency, and the knowledge they shared in the classroom was less structured. Most groups translated the acquired knowledge and needs arising from the field into authentic and relevant projects that could contribute to learners’ understanding of multiculturalism and/or children’s rights.

3.1.3. **Problem-solving skills**

Students described the problem-solving process thus: “I have learned to solve a problem,” and “I realized that before defining a problem I need to recognize that I have one.” Some students said: “I learned that I have to find the best solutions by using different criteria for selection, which was the most difficult part of the process,” and most students added that “I understood that finding a solution is not enough, I have to devise an action plan to make it happen.”

3.2. **Personal-Leadership Competencies**

The second main category related to participants’ perceptions of their personal and leadership competencies acquired during the course. This category was divided into two subcategories: *personal*
competencies, referring to individual gains and understanding of abilities they possess, or insights about personal behavior and preferences; and leadership competencies, addressing group management abilities developed during the course.

3.2.1. Personal competencies

All students mentioned personal gains from working on a project. Some students referred to the awareness of their own intrapersonal capabilities such as the “ability to change and innovate,” the “ability to develop and upgrade myself,” as well as the “ability to concentrate,” understanding “that I am a moral person,” “that I like learning new things,” and that “it is important for me to succeed.” Two students summed it up well: “The course gave me self-confidence and enabled me to discover traits I was not aware of in my personality,” and “I believe in my ability to understand an idea that is completely new to me.”

Another aspect addressed by students was the competencies they had gained or their realizations referring to interpersonal capabilities such as “respecting others,” “giving space to each person,” “ability to learn from others,” and having the “ability to work in a group, as opposed to working alone.”

Projects showed that all groups reflected on the process and application. In their reflections presented to class, they repeated some of the personal gains mentioned above.

3.2.2. Group management/leadership competencies

In group management, the interpersonal abilities were taken a step further when students related their experiences in their own groups. Some described the process of conducting learning in the group: “I experienced conducting processes in the group,” and “I learned to manage and maintain learning processes in the group.” Others referred to their abilities in relation to managing the group: “I understood that I am good at leading a group.” Another student stated that she learned “to cope with people in the group and express new ideas.” Two other students realized their influence over the group, explaining that they “could make others think more openly and critically” and could do so “by leading without forcing myself on people and making them feel equal in the process.”

Some students related their readiness to lead a group of 10 first-year early-childhood education students in the second semester, stating that they “understood what the expectations are, and what it means to lead a group in the second semester” and that they were “confident they could do it” because they “received tools to manage a group.”

Projects showed that within each group, students worked in cooperation and mutual stimulation, using technological means to facilitate communication among group members and enabling each student to contribute in his or her field of expertise. Most groups showed awareness of the need for time management and designed a timeline for the process (observing needs in the field; planning and fine-tuning sessions; meeting with content experts; designing the project; application; evaluation). All groups were motivated to work on the project and to carry it out professionally. They observed and gave their full attention to the field and its rising needs. In some cases, students faced difficulties in finding a common denominator, which set them back a little and discouraged them.

3.3. Pedagogical Competencies

The third main category was related to participants’ perceptions of the pedagogical competencies acquired during the course. This category was divided into two subcategories: experiencing PjBL, referring to its different aspects; and leading PjBL, describing how participants would apply it with other students in the second semester.

3.3.1. Experiencing PjBL

Experiencing PjBL was addressed by students from the perspective of becoming acquainted with the different steps. Some students stated: “I learned to work according to PjBL steps,” and “I learned how to
combine all the parts of a project.” Others mentioned planning and aims: “I learned to plan a project and think about mutual aims.” Others stressed the product and its relevance to other audiences in wider circles: “The final product is a good one so we can pay it forward.” Several students addressed PjBL advantages as perceived by teachers, indicating that they had “learned that this is a good way of teaching in which you give the students the pedagogical rod to teach the art of fishing.” An additional benefit was mentioned concerning collaborative learning and thinking development: “The project helped us work together and develop our thinking regarding the chosen subject,” and “the collaborative work gave us a sense of significance.” Another student offered the insight that “focusing on the culture of discourse during the project is essential.”

3.3.2. Leading PjBL

Participants stated that they had gained the ability to lead students in the use of PjBL: “Now I can guide a whole class using PjBL without being intimidated or facing major problems,” and “I understand how to manage a project.” Many students mentioned that their main goal would be “to create meaningful learning.” Elaborating on that, they related what they would like to teach through the use of PjBL, which is mainly “to teach them about responsibility,” “to teach students to work in cooperation,” and “to teach them to work independently.” Some students also referred to the products of PjBL, explaining that they could “lead [students] to think about a project or a product” and “direct them in how to design a product that will be presented to the class.”

All groups applied their projects in the field, whether in school, kindergarten, or the at the teachers’ college. The project was fully applied as planned, contributing to the target population.

4. Discussion and Conclusions

Our study examined the perceptions of 30 second-year pre-service teachers in an honors program at a college of education in Israel regarding the contribution of PjBL in a course on multiculturalism and children’s rights. The novel idea was to prepare these students in the first semester, by practicing PjBL and through exposure to multiculturalism and children’s rights, to become tutors/leaders of groups of first-year pre-service early-childhood education teachers in the second semester. This innovative approach could serve as a model for developing social responsibility, as well as awareness of multicultural differences and acceptance. It also has implications for general teacher education reform, illustrating the benefits of active or practice-based learning.

The approach of preparation for paying it forward draws attention to the interplay between the pedagogical strategy practiced, here PjBL, and the development of content knowledge, pedagogical content knowledge, and personal growth. A consideration of these findings suggests implications for practice-based teacher education programs to influence the development of pre-service teachers and their confidence in their abilities as teachers.

4.1. Developing Personal-Leadership Traits and Competencies

Working on a project in groups, students related and demonstrated awareness of the intrapersonal and interpersonal traits they possessed. They stressed their awareness of existing traits or competencies, and their discovery of traits they had but had not actually been aware of prior to this experience with PjBL.

Students also indicated awareness and gains in relation to group management or leadership, focusing on the process of conducting PjBL. They also became aware of their abilities to manage a group, and of the influence they could exert on the group while working together on a project. This is a unique finding related to the gains of pre-service teachers experiencing PjBL.

4.2. Expanding Pedagogical Content Knowledge

Readiness to apply the PjBL process comprised of the teacher education initial encounter with the strategy by experiencing it focusing on the following steps: planning, applying, reflecting, and presenting. Among
the advantages mentioned were collaborative work, development of thinking, and development of a culture of discourse. Helle, Tynjälä, and Olkinuora (2006) indicated that PjBL involves both cooperation and collaboration. Fernandes (2014) added that PjBL fosters deep-level learning and important skills for professional practice, as the development of the project provides a real-life context for linking theory to practice.

In leading PjBL, the students indicated that they had gained the ability to lead and to create meaningful learning focused on teaching students responsibility and collaborative work. They perceived their roles as guides, leading students to think, and directing them to design meaningful products. De los Ríos-Carmenado, Rodríguez, and Sánchez (2015) found that skills and behaviors developed by using PjBL included teamwork, leadership, and negotiation.

4.3. Expanding Content Knowledge and Skills

Findings indicated that the students practicing PjBL expanded their content knowledge of multiculturalism and children’s rights, indicating the importance of awareness of both issues, followed by considerations for application as in-service teachers.

On the issue of multiculturalism, in addition to general knowledge gained by using PjBL, students mentioned their exposure to different cultures as a result of working in groups on a project. Another gain was the awareness of what the approach entails, and that it should be applied and taught in schools to create a better understanding between people and their cultures. Students’ projects mentioned experiencing work in multicultural groups and taking on projects in kindergarten, school, and college to address different aspects of multiculturalism.

On the issue of children’s rights, students practicing PjBL stressed their newly gained awareness of the fact that children possessed rights. They also expressed understanding of the importance of children’s rights in general, and that it is addressed by many artists in different art forms. Moreover, they realized that children’s rights are culture-dependent, making the connection between multiculturalism and children’s rights.

Creating new content knowledge and improving professional knowledge through the use of PjBL is supported by De los Ríos-Carmenado et al. (2015), who investigated the process of promoting professional project-management skills in engineering. In their study, they established a link between teaching using PjBL and professional competencies. They found that students improved knowledge and professional skills in three areas: technical, contextual, and behavioral. Strobel and van Barneveld (2009) also stated that PjBL is effective in training competent and skilled practitioners and promoting long-term retention of knowledge and skills.

Problem-solving is a vital 21st-century cognitive skill. Häkkinen et al. (2017) stressed the need for preparing teacher-students for 21st-century learning practices, stating that the most important were strategic learning skills, collaborative problem-solving skills, and ICT.

4.4. Conclusions and Implications

First, the study showed that PjBL may benefit different areas: enhancing personal leadership traits, pedagogical content knowledge, and content knowledge and cognitive skills. We suggest that more courses in teacher education adopt this teaching strategy and offer pre-service teachers the much-needed practice in a safe college environment, in preparation for implementation in schools.

Second, pre-service teachers participating in this study reported feeling ready and confident enough to implement PjBL at the teacher education college, serving as the leaders and guides of their peers. Therefore, we recommend that teacher education programs consider creating more opportunities for students to share their knowledge and expertise with other students from different faculties, creating collaboration and meaningful learning on an equal basis, serving as tutors and guides.

Third, because pre-service teachers indicated that it was their first encounter with the issue of multiculturalism and children’s rights, we recommend designing and integrating a course that addresses these issues into teacher education programs in Israel and worldwide.
Related to the ongoing teacher education reform, PBL, as presented in this study through the application of PjBL, adds to the previously insufficient data on its effect on in-service teachers. It may enhance the understanding of current pedagogies and approaches and how they contribute to teachers’ content and pedagogical knowledge, skills, and characteristics as future tutors and guides for their fellow students as well as teachers in schools. Practice and preparation for guiding PjBL could promote the acquisition of relevant knowledge and 21st-century skills using collaborative learning required for teaching, applied in a safe, judgment-free environment, before going out to schools. The extra component of actually paying it forward by guiding PjBL in the college context is yet to be investigated but was at the heart of the innovation driving students to excel, as they were considered responsible for passing on their accumulated knowledge and practice to first-year students.

4.5. Limitations

The current study focused on a group of second-year pre-service students in an honors program who were trained to use PjBL for the purpose of leading first-year students, exposing them to multiculturalism and children’s rights. The effects of pilot programs could be tested in different ways to strengthen external validity, and if the results were positive, expanded.

Participants in the course were a small, intellectually homogeneous group of students. The fact that there were no negative views and perceptions could be related to students’ motivation to learn and prepare themselves for teaching their fellow students in the second semester, or it may indicate a social desirability bias. In any case, further research comparing the group of students from the honors program with other pre-service groups of students at the college could provide more information about differences between groups in their ability to plan and apply PjBL. Second, the course was offered to pre-service students at a college of education preparing the students to become teachers. Environmental conditions, constituting another concern about external validity, could be monitored by offering such courses of preparation for paying it forward to students from other university faculties such as engineering and medicine. Third, the tools used in this study were qualitative, and suitable for the small group tested. Examination of larger groups of participants could use quantitative tools such as questionnaires using a pre-post design to examine the effects of the course on dimensions such as multicultural awareness, self-efficacy, pedagogical content knowledge, and development of leadership characteristics.

References


Division of Roles in Homeschooling: Desire and Ability to Change Places

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DOI: https://doi.org/10.33496/multicolors0202

Abstract

In Israel, like the rest of Western society, women are still largely responsible for childcare and housework. In homeschooling families, this division is even more prominent. This article explores homeschooling mothers’ perspective on role division. Using the auto-ethnographic-phenomenological approach to qualitative research of individual perceptions and experiences, I recruited a purpose-focused sample of 27 homeschooling mothers. Using interviews and personal logs (or diaries), I obtained data that underwent thematic analysis. The study findings indicate that mothers like being with their kids and that most of them would not want to change places with their partner, but the question arises as to whether there is a real possibility of choosing.

Keywords:
Mothers, homeschooling, division of roles

1. Introduction

In Israel, gender gaps in the workforce have diminished to the point that there is a significant female participation rate. Gender gaps are mostly limited to the nature of the job; number of weekly working hours, possibilities of advancement, and level of salary. Researchers in the field of gender inequality believe that the main obstacle to the full integration of women in the workforce is the need to navigate between work and family obligations. Most families in Israel adhere to the traditional two-parent, two-sex structure. It is therefore important to set an example by promoting gender equality in the home; this can be achieved by integrating fathers into childcare roles (Fichtelberg-Bermetz & Harris, 2011).

One way to achieve balance in the division of roles between men and women is through paternity leave. In Israel, as in most Western countries, fathers may take paternity leave, but in practice less than half a percent of Israeli fathers do so (Perez-Vaisvidovsky, 2014).