

# Discourse and Communication for Sustainable Education

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# Editorial

We are delighted to introduce a new issue of the Journal *Discourse and Communication for Sustainable Education*. This volume of the Journal covers diverse issues related to sustainable development and education for sustainable development. Situated within abroad international context, these papers represent meaningful research contributions to the Global Action Program on Education for Sustainable Development (ESD), which has succeeded the United Nations Decade of Education for Sustainable Development (DESD). The transition to sustainability has become a focal point in education and particularly in higher education institutions. We would like to express our gratitude to all the authors who submitted their research on various dimensions of ESD, signaling their commitment to the pursuit of sustainable development. Following the mandate of the global 2030 Agenda for Sustainable Development, the editorial team of the Journal pursues and supports international collaborations among universities around the world in conducting research on various sustainability issues, such as those published in this volume.

The paper by Joy Bertling and Kristen Rearden reports on the impact of a minimal-intervention professional development program focused on place-based education. Specifically, it examines teacher understanding of place-based art education, program support for helping teachers develop place-based art curricula, and teacher buy-in for implementing related curricula. The researchers found that the program was able to build upon pre-existing teacher interest to support participants in learning place-based art education despite the program's short duration. This study suggests that art teachers with an interest in sustainable pedagogies may be prepared to implement these approaches in their classrooms with short, concentrated training sessions that work within the framework of their existing professional development schedules.

The paper by Michele Stites, Christopher Rakes, Amy Noggle, and Sabrina Shah deals with a significant and timely issue within the context of global efforts to increase inclusionary practices among teachers. This article discusses preservice teachers' beliefs about inclusion and their beliefs in their ability to be effective inclusive teachers. One hundred and twenty early childhood and elementary preservice teachers from two universities, from both general and special education programs, participated in this study. The findings indicated that preservice teachers lacked a coherent understanding of inclusion and perceived themselves as needing additional development to be fully prepared to teach in an inclusive setting. The authors discuss the implications for teacher preparation programs based on the findings.

The paper by Erdogan Bada and Bilal Genc offers a discussion on sexism with reference to language, and focuses on how women are discriminated against in daily language and in academic writing. Although the authors are against any kind of discrimination, they highlight the need for particular care when it comes to dealing with this phenomenon in language and language use. Language is not only a symbolic means through which humans interact; it is also a product of human intellectual activity imbued with various experiences of our past and recent ancestors. Thus, it is also a reflection of our society's conceptual system through which we interpret physical and mental phenomena. In this paper, the authors have analyzed views regarding sexism and language, and attempted to highlight the significance of improving so-called injustices in language.

The paper by Amit Roy, Risto Ikonen, Kuldeep Kumar and Tuula Keinonen focuses on the issue of alcoholism in the state of Punjab in India, an area that has become notorious for its alarming rise in alcohol and drugs consumption. This study is based on the ‘Children as Agents of Social Change’ framework, and used cost-effective Information and Communication Technologies (ICTs) along with constructivist pedagogy to convene dialogue among school-going adolescents and alcohol related experts from multiple domains. Results indicate that the intervention significantly improved experimental groups’ scientific knowledge. Students started to think critically about media, and some self-motivated students advocated against alcohol among drinking adults. Their article epitomizes how a low-cost intervention utilizing ICTs can support transformative sustainability education globally.

Michael Buchanan’s paper reports on a qualitative study that sought to understand the factors affecting the retention of religious education leaders in their roles for the full term of their appointment. The study was undertaken in Australia where twenty per cent of the student population are educated in Catholic schools. In these schools, the Religious Education Leader is a senior leadership position and is responsible for enhancing the religious dimension of the school in all facets of school life within and beyond the curriculum. The role also has a key impact on augmenting the Catholic identity of the school. The study identified some key factors impacting on the sustainability of religious education leaders, including feelings of disconnection, excessive role demands and the lack of structural support. The paper concludes by making recommendations oriented towards sustaining religious education leaders in their role.

The paper by Hüseyin Kotaman, Asly Balcý, and Zeynep Nur Kýlýç Aydýn examines early childhood teachers’ reading attitudes. The authors identify the total number of books these teachers have read about their profession and the total number of the books they have read on general topics, as well as their teaching experience and explores the impact on their teaching efficacy. Stepwise regression analyses for subtests and for total teaching efficacy was carried out that indicates that reading attitude and teaching experience are significant predictors. For subtest Instructional Strategies (IS), only reading attitude appears as a significant predictor. Accordingly, in order to improve early childhood teachers’ reading attitudes, book clubs and peer reading groups are recommended.

Camel Roofe’s and Therese Ferguson’s paper offers a preliminary exploration of Education for Sustainable Development (ESD) content in Technical and Vocational Education and Training (TVET) curricula at the lower secondary level in Jamaica. Utilizing qualitative content analysis, the authors analyzed the curricula of three TVET related subjects and found that though ESD issues, perspectives and skills are integrated in various components of the curriculum, many of the ESD issues, perspectives and skills the research sought to identify were not evident in the curricula. Additionally, based on the analysis, they contend that the curriculum lacks alignment among the components (objectives, content, learning experience, assessment, teaching strategies) that reflected ESD content, and that there is need for integration of more such content in the curricula to ensure that TVET and ESD yield the relevant benefits.

The article by Geert Franzenburg, Dzintra Iliško, and Hugo Verkest describes how an intergenerational and intercultural evaluation of contested historical narratives can facilitate a culture of resilience and remembrance in schools, institutions and communities. Drawing on United Nations-oriented peace education projects in Belgium, Germany and Latvia, the article suggests a kind of transformative “grammar of remembrance”,

which integrates narratives, rituals, discourses, and stereotypes in a multidimensional way. By applying such “syntax” and “vocabulary” of remembrance in educational contexts – concerning historical, religious, social, and value oriented aspects – the process of reconciliation and resilience becomes sustainable, as all participants share similar experiences and analogue purposes – with different expressions. Additionally, this results in the generation of their own individual and collective memory cultures and coping strategies within conflict situations.

Stellan Sundh’s study centers on the use of international student-interactive video-conferences in teacher education. Since international experiences and perspectives are important components in the program of study to prepare for a career as a teacher in a multilingual and multicultural society, interaction between students of different cultural and educational backgrounds are important. At the same time, unlimited international student mobility is not in line with the reorientation of teacher education towards sustainable development. For this reason, ‘virtual’ meetings can be a sustainable way to integrate international perspectives of students cooperating across cultural and geographical borders in higher education. The results of the study present the themes highlighted in the interaction between international exchange students and Swedish teacher students at two different campuses in Sweden, and show that student-interactive video-conferences are useful in order to heighten students’ awareness of differences and similarities in schools worldwide.

The article by Abdulkadir Kabadayi and Fatma Altinsoy focuses on the need for environmental awareness in preschool aged children. At this age, children are known to be very curious, and very sensitive to flora and fauna in the natural world, which provides a strong foundation for lifelong environmental awareness. The authors investigate whether traditional training methods or technology-assisted training methods will lead to more permanent behavioral change towards sustainability. The findings of the study found that methods supported by technology are more effective as they enhance students’ interest and attention whilst also increasing the level of student achievement.

We would like to express our gratitude to our guest editor Therese Ferguson and all the reviewers who assisted in the publication of this volume. The next volume will include articles presented at the 16<sup>th</sup> annual Baltic and Black Sea Consortium in Educational Research/Journal of Teacher Education for Sustainability (BBCC/JTES) international conference that took place in Antalya, Turkey in 2018, under the theme ‘Reorienting Teaching and Learning Strategies for Building Sustainable Future’.

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## Professional Development on a Sustainable Shoestring: Propagating Place-Based Art Education in Fertile Soil

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### Abstract

Research on the impact of place-based education (PBE), in which educational experiences are situated in the local environment (Smith, 2002), consistently suggests academic, social, and affective benefits across demographics. Traditionally, professional development supporting PBE has been designed to support large-scale initiatives. In this study, a bottom-up approach for expanding the reach of place-based art education (PBAE) was implemented with teachers (n=11) from a school district in the southeastern United States through two sequential professional development workshops. We examined the extent to which this minimal intervention impacted teachers' understanding, buy-in, and creation of PBAE curricula. Results suggest that this organic approach, with teachers positioned as agents of change, can build upon pre-existing teacher interest and equip teachers to expand PBAE into their teaching contexts.

*Keywords:* professional development, place-based education, art education, minimal intervention, case study.

The current condition of our environment accompanied by the corresponding entrenched social, political, and industrial resistance to environmental action necessitate the need for radical change. Pope (2005) argued that our species often struggles to react to intangible threats:

*The problems that environmentalism has failed to get a grasp on, or develop a deep public commitment and attention to... are intangible, global and future oriented. Global warming, habitat fragmentation, and the loading of global ecosystems with persistent but toxic and disruptive industrial chemicals are simply harder for an opportunistic, reactive primate species to understand as threats. (An Alternative View section, para. 5)*

One solution is education rooted in the sensory, embodied locales of place. The literature on place-based education demonstrates that this pedagogy has the potential to make abstract threats tangible and to mobilize students for action – locally, but ultimately globally as participation grows.

Place-based education situates educational experiences in the local environment, including the local social, cultural, political, natural, and economic arenas (Smith, 2002). It makes education relevant by connecting it to students' lives, enhances learning by providing real-world experiences, meets the emotional needs of students to connect with nature, and better prepares students to protect land and communities. Other educational traditions and pedagogies also aim to foster a connection between learners and the outside world and often overlap or are interchangeable with place-based education, including: *Earth Education*, Education for Sustainable Development (ESD), experiential learning, Environment as an Integrating Concept (EIC), environment-based education, conservation education, cultural journalism, real-world problem solving, context-based learning, problem-posing education, outdoor education, environmental and ecological education, bioregional education, natural history, critical pedagogy, service learning, community-based education, and Native-American education (Anderson & Guyas, 2012; Conaway, 2006; Gruenewald, 2003; Knapp, 2008; Powers, 2004). For instance, University Educators for Sustainable Development (UE4SD, 2015) described Education for Sustainable Development by emphasizing the importance of social relevance and real-world situations:

*A good ESD educator at all levels not only knows his/her subject or discipline but is also able to transfer this knowledge and to use it in practice for desired (societally relevant) goals – so that the learner is able to take action based on the knowledge. An efficient ESD thus shifts the model of knowledge dissemination towards a more participatory one, where students' competences are developed in interaction with the educator: in discussions, engagement in real world situations, joint projects and activities. (p. 32)*

Because of these similarities, we will use the term “place-based” to refer to any education program rooted in the local environment.

Since the Orion Society coined the term “place-based” in the early 1990s (Sobel, 2004), programs have emerged across the United States and internationally to include Canada, Great Britain, Norway, Australia, Costa Rica, India, Bhutan, New Zealand, Japan, El Salvador and China. The body of literature on place-based education programs is robust, and the findings are consistent: place-based education programs are widely beneficial. Benefits for K-12 participants include environmental knowledge, awareness, and appreciation; sense of place and place attachment; empathy with the environment; pro-environmental orientations; academic achievement and motivation; critical thinking; and perceived sense of engagement, collaboration, and sense of significance of learning (Athman & Monroe, 2004; Bertling, 2015; Azano, 2011; Buxton, 2010; Conaway, 2006; Creel, 2005; Ernst & Monroe, 2006; Howley, Howley, Camper, & Perko, 2011; Lieberman, Hoody, & State Education and Environmental Roundtable, 1998; Linnemansons & Jordan, 2017; Powers, 2004; Santelmann, Gosnell, & Meyers, 2011; Sondergeld, Milner, & Rop, 2014; Takano, Higgins, & McLaughlin, 2009). These benefits occur regardless of geographic area, age, race/ethnicity, achievement level, or special needs of participants. Given the resounding conclusions of the literature, the rapid and extensive spread of place-based curricula and programs is imperative. When coupled with the deteriorating state of our environment, such curricula become crucial for educating citizens for a sustainable world.

Currently place-based education exists in a number of forms: as district-wide and school-wide initiatives; as curricula designed and implemented by individual teachers in their classrooms; and in non-formal and informal learning contexts (Fazio & Karrow, 2013). District-wide and school-wide initiatives provide teachers with broad and sustained support including administrative support, leadership teams, professional learning opportunities, community partnerships, and opportunities for collaboration and interdisciplinary teaching (Fazio & Karrow, 2013; Powers, 2004). In school-wide programs, students' experience with place-based curricula is comprehensive and sustained: the curriculum "permeate(s) classrooms, hallways, school grounds, and local environs" (Fazio & Karrow, 2013, p. 614). While large-scale programs might be considered the ultimate goal in the implementation of K-12 place-based education, these initiatives do not often lend themselves to rapid and widespread adoption. They require widespread collaborations; long-range strategic planning; professional learning institutes; and targeted efforts to gain support from policymakers, those in key leadership positions, and those who will implement the changes (Batsche, Curtis, Dorman, Castillo, & Porter, 2007). Due to the extensive time, financial resources, and level of commitment required by all involved, school and district-wide initiatives may not immediately be feasible in all contexts. In order to expand the reach of place-based education, more organic, bottom-up approaches might occur simultaneously. In educational settings where interest and resources have not aligned to establish place-based foci, individual teachers and teacher teams might be best positioned as the harbingers and initiators of this curricula.

Professional development opportunities that can be broadly and rapidly implemented and propagated are needed. At the same time, research is needed on these forms of minimal- intervention professional development that can be organically woven into teacher schedules and easily implemented with minor time and resource allocation to determine their effectiveness, particularly in supporting teachers receptive to forms of place-based education. Non-science teachers represent fertile ground for these studies as they have had limited exposure to place-based education (Linnemanstons & Jordan, 2017). They represent a wide body of untapped potential as they have the power to bring ecological issues beyond the domain of science into the forefront of the general curriculum, thereby promoting a deeper and more holistic understanding of these issues that are deeply interconnected with all areas of life (Sondergeld, Milner, & Rop, 2014). Specifically, the discipline of art education is uniquely poised for compatibility with place-based education due to its inherently "sensory, subjective orientation" that can shift students' ecological attitudes and behaviors (Inwood, 2008, p. 70; Bertling, 2015).

This study examines one such minimal-intervention place-based education professional development program within the discipline of art education. The three research questions include:

Can a minimal intervention professional development program focused on place-based art education:

1. Expand teachers' understanding of place-based art education?
2. Increase teachers' buy-in related to implementing place-based art education?
3. Support teachers in successfully selecting and creating place-based art curricula?

### **Professional Development in Place-Based Education**

In order to promote education for sustainable development, research on various methods of how teachers grow as professionals is needed (Yoo, 2016, p. 92). Research on professional development in place-based education is dominated by studies of “showcase programs”—approximately week-long, residential summer institutes. These programs often involve outdoor field studies, such as studies of rivers and watersheds; several follow-up sessions; and a fairly small number (5–20) of participants (Linnemanstons & Jordan, 2017; Meichtry & Smith, 2007; Powers, 2004; Rosenthal, 2011; Sondergeld, Milner, & Rop, 2014). In some programs, attendance was encouraged or required by administration to support school-wide initiatives (Powers, 2004), other programs offered financial incentives (Linnemanstons & Jordan, 2017), and others consisted of volunteers (Meichtry & Smith, 2007; Rosenthal, 2011; Sondergeld, Milner, & Rop, 2014). The findings of these studies are widely consistent in demonstrating positive impacts for participants including increased math, science, and environmental education knowledge; stronger environmental attitudes; deepened consciousness of place, ecology, and self-identity; increased teacher confidence and buy-in; and improved classroom practice. Within the field of art education, one study examined a six-day, residential summer institute at a wilderness facility where nine school-based artists were engaged in place-based education in the arts as a way to impact their habits of mind toward energy and its conservation. Consistent with the larger body of literature, the program positively impacted the artists, in their knowledge, awareness, and habits related to energy conservation and in their desire to incorporate their learning into their pedagogy.

Powers (2004) found in her evaluation of four place-based programs that summer institutes were invaluable for sustaining the school-wide place-based initiatives. Aspects of the programs that contributed to success were integrating experiential learning and the local setting; providing specific examples of place-based education; and offering opportunities to practice and participate in experiences, to develop curricula, and to build supportive teaching communities (Meichtry & Smith, 2007; Powers, 2004). While showcase programs represent many best practices, as they fully immerse teachers in experiential learning opportunities in outdoor environments in order to model place-based curricula and positively impact teacher attitudes toward place, they require significant resources and teacher time. Additionally, they are geared toward helping participants develop a connection with the natural environment that might not have existed prior to the workshop. For those who might already have such a connection, other less-intensive professional development opportunities might be possible.

### **Minimal Intervention Approaches**

A large body of research demonstrates that sustained, intensive professional development is more likely to be more effective than programs of shorter duration (Garet, Porter, Desimone, Birman, & Yoon, 2001). Similarly, research supports the positive impact of degree-related coursework for shaping instructional approaches (e.g. Pontes-Pedrajas & Varo-Martinez, 2014). However, studies on minimal intervention professional development demonstrate that improvement in practice and curricular change is possible with programs limited in time, expense, resources, and intensity (Emmer, Sanford, Clements, & Martin, 1982; Fields, 1990). Those minimal intervention programs that are most successful go beyond providing written material to include workshops or other

forms of support, provide a clear rationale, propose recommended changes already tied to existing practice, and limit demands on teachers (Coladarci & Gage, 1984; Fields, 1990). Research by Zhukova (2018) suggests that, after completing their first year of teaching, novice teachers are “particularly interested and open to participation in intense professional development activities” (p. 9), such as workshops. Our place-based professional development program incorporated these recommendations along with encouraging collective participation (Garet et al., 2001), where teachers from the same discipline, visual art, had the opportunity to professionally communicate and support one another in this curricular endeavor.

### **Methodology**

We approached this study through a pragmatic paradigm, as we rejected historical dualisms between quantitative and qualitative traditions to embrace the mixing of methods (Greene, 2007). Subsequently, the research questions played a primary role in determining the methods we employed. Through this paradigm, we conducted a mixed methods case study of a group of visual art teachers and student teachers participating in a series of two place-based art education professional learning workshops. This case study design allowed for an in-depth exploration of teacher understanding, buy-in, and creation of curricula related to place-based art education. In this qualitative dominant, integrated design with a sequential component, methods were mixed for the purpose of complementarity, to tap into the different facets of teacher buy-in and creation of curricula, as well as for development of a rubric for assessing levels of place-based integration (Greene, 2007).

### **Setting and Participants**

This study was conducted in the southeastern United States within a large school district encompassing urban, suburban, and rural areas. Approximately 110 visual art teachers and 3 student teachers worked in the district and were required to attend monthly professional development sessions. As part of the minimal intervention professional development program under investigation, we conducted two sequential professional development workshops that were held during these built-in district professional development sessions. The first was during a district-wide professional development day, and the second was after-school at a district-wide professional learning session for art teachers. Prior to the first workshop, we inserted an announcement in the district’s weekly email newsletter for art teachers that provided a brief overview of place-based education and critical place-based art education, an outline of workshop activities, and a request that those interested commit to attending both sessions. Art teachers chose from a selection of workshop options with six competing options both sessions. Additionally, 19 of the 110 teachers were leading sessions concurrent to our sessions, which precluded them from participating in ours. We had 12 attendees that attended both sessions with all 12 of these teachers consenting to participate. These teachers and student teachers were primarily white females and taught a range of grade levels (elementary, middle, and secondary). Additionally, a high percentage (73%) were former students or current student teachers of the presenter, the primary researcher. This participation was unanticipated due to the small percentage of her students (less than 10%) as art teachers in the district.

## Data Collection

Data collection included pre- and post-questionnaires, participant and non-participant observation, and document analysis of participants' "unit plans." Questionnaires and observations were designed to address Research Questions 1 and 2: 1) teacher understanding of place-based art education and 2) increased teacher buy-in related to implementing place-based art education. Document analysis of unit plans addressed Research Question 3: supporting teachers in place-based art curricula development (see Table I). Questionnaires utilized selected-response and open-ended questions related to participants' understanding of place-based education and their interest level in implementation (see Appendix A & B). Participants were provided with unit plan templates designed to facilitate their construction of place-based art curricula (see Appendix C). These unit plans were scored by a researcher-constructed rubric to assess their level of place-based implementation (see Appendix D).

Table I  
*Research Questions & Alignment with Data Collection Methods*

	Research Questions		
	Questionnaires	Observations	Unit Plans
1. Can a minimal intervention professional development program focused on place-based art education:			
a. Expand teacher understanding of place-based art education?	X	x	
b. Increase teacher "buy in" related to implementing place-based art education?	X	x	
c. Support teachers in successfully selecting and creating place-based art curricula?			X

X = primary data collection method, x = secondary data collection method

## Data Analysis

Mixed methods data analysis was conducted for purposes of *representation*, to better identify underlying patterns in the data, as well as for *legitimation*, to contribute to the interpretive validity of data interpretation (Onwuegbuzie & Teddlie, 2003). Both qualitative and quantitative methods were integrated during the data analysis phase through quantization (Tashakkori & Teddlie, 1988) of questionnaire and unit plan components. The remainder of the data was analyzed in accordance with procedures from the qualitative methodological tradition.

We initially cleaned the data. First, we eliminated data from one consenting participant who did not supply all data sources, thereby reducing our participants to 11. Next, we quantized selected response items on the questionnaires by assigning numerical rankings to responses related to interest level and intent to implement curricula, for instance. Then, we conducted initial and focused coding for open-ended responses to identify themes. Themes and quantitative data were tabulated in order to compare pre- and post-questionnaire responses.

We used open coding to analyze the unit plans. Themes we identified from select components of the unit plans assisted us in developing a rubric to assess the unit plans' level of place-based integration. Then, these same unit plans were scored with this

researcher-developed rubric. Qualitative data from the unit plans supplemented these scores by providing contextual, in-depth understanding (Greene, 2007). Similarly, analysis of field notes provided supplemental data to describe the case.

## Findings

### Understanding of Place-Based Art Education

**Pre-responses.** Pre- and post-questionnaire items provided data related to participant understandings and allowed for a comparison between pre- and post-responses (see Appendix A & B). While all participants had some exposure to place-based art education through the recruiting email, which gave a two-paragraph definition and overview with comparisons to similar pedagogies, we were interested in examining their understanding due to their differing levels of prior knowledge as well as differing engagement in reading and retaining information from the email. Data from the pre-questionnaire revealed that participants began the initial workshop with a range of familiarity with the pedagogy, with scores forming a bell curve from “unfamiliar” to “very familiar.” Most participant responses fell in the “somewhat familiar” to “familiar” categories, with a mean of 2.36 on a 4-point scale.

When those who reported familiarity were asked to define place-based art education, all six participants used references to place, community, and/or the environment to identify the central focus of the pedagogy. For instance, one participant defined it as “knowing the environment & community of the students you are teaching and gear the lessons to apply to that,” and another wrote, “work is inspired by emotions, experiences, culture and social structures of a place or community.” One participant went further to highlight the importance of the local context and implied a critical pedagogical component: “Using knowledge of the environment and surrounding community to create an interactive curriculum for students, where they impact the community and environment in a positive fashion. Often place-based education involves going out into the environment & community.” However, the responses overall showed room for growth in participants’ understanding of the pedagogy.

**Post-responses.** The first item on the post-questionnaire was designed to measure participants’ perceived growth in understanding (see Appendix B). In response to the question “To what extent have these workshops expanded your understanding of place-based art education?” all participants reported that the workshops either “expanded [their] understanding” (4/11) or “significantly expanded [their] understanding” (7/11) with a mean response of 3.64 on a 4-point scale. Of these participants, one selected “significantly expanded my understanding” and added an exclamation mark. Unanimously, participants reported positive growth in their cognitive understanding of place-based art education as a result of the two workshops. However, cognitive understanding is not sufficient to indicate intent to implement and implement successfully. Thus, teacher buy-in becomes an important phenomenon to examine.

**Teacher Buy-In.** In this study, teacher buy-in was conceptualized as: 1) interest and 2) intent to implement the pedagogy in their teaching context. Pre- and post-questionnaire items were designed to measure these constructs and provide a comparison. Additionally, observation data supplemented the questionnaire data by providing context for understanding participant responses.

**Pre-responses.** Prior to the first workshop, participant interest levels ranged from somewhat interested to very interested with most participants (7/11) reporting “interested” on the pre-questionnaire with a mean of 2.54 on a 4-point scale. Participants indicated a diversity of reasons for their initial levels of interest. Many responses described the desire to learn something new, such as, “I like new things! And I like the place where I live.” Others’ interest grew out of their prior relationship with the researcher/presenter, who was their former university instructor, and included the response: “Missing Bert.” Other participants expressed the desire to learn how to incorporate the community or place into their curriculum, such as “[I] would like to do a place-based lesson but not sure about the logistics of making it happen.” Still other participants cited student-centered reasons. For example, one participant stated, “My school community is very diverse so if I could find a way to implement that into my classroom it would spark student interest.”

**Post-responses.** At the conclusion of the workshops, participants indicated higher levels of interest in place-based art education. Post-questionnaire responses fell narrowly within the “interested” to “very interested” categories, with most participants responding “very interested” (6/11). Unlike the pre-response, no participants indicated “somewhat interested.” The mean increased from 2.54 to 3.0, and the mode increased from 3 to 4 on a 4-point scale. Additionally, each participant’s level of interest either stayed the same (5/11) or increased (5/11), except for one participant whose score dropped one level.

In citing reasons for their interest level, participant responses narrowed from a wide range of responses to coalesce, almost primarily, around student needs and community-based reasons. Responses included: “This will deepen understanding and make art relevant to my students,” “I think my students would benefit from this positive focus and potentially gain levels of self-efficacy related to creating change,” and “It is important for kids to know where they come from, place around them & their role in this & that drives my interest.” The overview of the body of literature on place-based education and its benefits to students, presented during the first workshop, seems to have contributed to this emphasis.

Participants reported on the likelihood of their using the unit plans, created during the second workshop, in their teaching context. Responses averaged 3.27 on a 4-point scale. They ranged from “somewhat likely” to “very likely” with most respondents selecting “very likely” (5/11). Open-ended responses were positive and many expanded upon plans for implementation. For instance, participants wrote, “I would like to expand my ideas and practice incorporating other place-based lessons,” “I would like to get the specific [school] community involved as well-donations of materials and excitement about auction,” and “I would like to do this with my Art 1 or Advanced Drawing class next year!”

Participant behavior during the workshops supported the enthusiasm evident in many questionnaire responses. For instance, the majority of the participants indicated their willingness to implement the unit plan during the upcoming fall semester. Additionally, one participant shared with us that she communicated her learning of place-based education from our workshops with her principal and that place-based education is now becoming a school-wide initiative, particularly through the leadership of the related arts teachers. She also shared an interdisciplinary project she plans to implement in the fall that involves a collaboration with a public aquarium, where students will research native fish species, produce a large-scale art installation at the aquarium, and present their work to guests.

## **Creation of Curricula**

During the second workshop session, participants created a unit plan that incorporated elements of place-based art education. These unit plans were analyzed with a researcher-developed rubric that focused on content and context. Specifically, we analyzed the unit plans for the extent to which they incorporated the following aspects: local content, local artists/art forms, interdisciplinary aspects, local context, affective components (value of place) and transformative components for impacting the local community. Each indicator had a range of 1 to 4, and total rubric scores ranged from 6 to 24. The average rubric score was 16.6, with the indicator of local artists/art forms having the highest average score of 3.6. A local artist or art form may have included local weavers to demonstrate technique or a local art form such as graffiti. Second highest was the indicator of local content, with an average of 3.4. This included a focus on a local issue, such as mural design to focus on use of space. The average of the other four indicators were either 2.5 or 2.4. The indicator with the widest range of scores was for interdisciplinary aspects. While some unit plans clearly integrated science or math concepts and showed potential for contextualizing learning in a holistic manner, others reflected a more isolated approach to the unit implementation.

## **Discussion**

As participants purposefully selected professional development on this topic, our approach consisted of building on their pre-existing interest. Ten of 11 participants indicated that they were either interested or very interested in the topic. While this initial interest was an expected characteristic of participants, the high percentage of participants who were former students or current student teachers of the primary researcher was unexpected. Given this initial interest and the number of participants who were former or current students of one of the researchers, the question of the extent of interest in place-based art education by a larger population of art teachers could be raised. However, post-questionnaire responses reflect a high level of interest in creating art lessons that incorporate the local environment. Unit plans reflected not only their interest but also their ability to incorporate local elements into the design. Enthusiasm for reconfiguring entire art programs into venues for promoting student engagement with local issues in a transformative manner was palpable particularly during the second session. Based on these findings, we are now interested in disseminating our strategies for informing art teachers' views on place-based education, fostering art teacher buy-in related to place-based education, and supporting art teachers with both the design and implementation of place-based units.

## **Conclusion**

This pedagogy is informed by the ecological imagination, an appropriation and expansion of Greene's (1995) social imagination. She outlined how the imagination has power to overcome familiar definitions and divisions, to foster empathy, to expand consciousness, to envision other realities, and to begin the process of working toward a better world. Her discussion of this imagination focused on its power exclusively within the social world. However, the imagination is also desperately needed within an ecological

context, where arbitrary demarcations and hierarchies between humans and other organisms exist that need to be bridged and new ecological realities need to be constructed. The ecological imagination holds promise for this new mode of education: education that embraces the arts as a way to free imaginations. Through this approach, students are liberated from the normalized constraints of everyday, routine thinking and acting to invent fresh paradigms and to engage in novel ecological behaviors. A critical place-based art education can make this emancipation possible. Through a critical place-based curricular approach, art education becomes a means of awakening the ecological imagination—opening the world to new relationships, possibilities, critiques, and, most importantly, acts (Bertling, 2013, 2015).

Benefits of critical place-based education, such as fostering “a sense of wonder toward the places we inhabit, an awareness of the cultural and ideological forces that threaten them, and the motivation to take action” (Graham, 2007, p. 388), are well-documented in the research. While globalized perspectives are imperative to engage students in worldwide efforts pertaining to sustainability, “local cultures, languages, histories, and geographies anchor these transformative efforts within the neighborhoods and communities where implementation takes place” (Kelly-Williams, Berson, & Berson, 2017, p. 6). Therefore, the challenge lies in creating professional development offerings in this area that are not only logistically feasible but also transformative for participants.

Recognizing individual teachers as agents of change rather than relying on large-scale professional development offerings is one way to approach the dissemination of the positive outcomes associated with place-based education. As noted by Fazio and Karrow (2013), we can look to teachers as leaders for school-based changes rather than relying solely on administrators. Looking beyond the input of designated leaders and instead creating a shared leadership mode can create a setting in which teachers, as leaders, provide a catalyst for organic, bottom-up initiatives. The professional development model for empowering teachers to implement critical place-based art education described here shows potential for broader impact. Results of this study suggest that teachers themselves comprise the fertile soil in which place-based art education curricula are effectively designed and propagated.

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Appendix A  
Place-Based Art Education Workshop Pre-Questionnaire\*

Name \_\_\_\_\_

1. How familiar were you with *place-based education* (or *place-based art education*) prior to reading the announcement for this workshop?
  - a. Unfamiliar with this approach
  - b. Somewhat familiar with this approach
  - c. Familiar with this approach
  - d. Very familiar with this approach
  
2. If you answered c or d above, please provide a brief description of place-based education.
  
  
  
  
  
  
  
  
  
  
3. What is your interest level in implementing place-based art education in your classroom?
  - a. Not interested
  - b. Somewhat interested
  - c. Interested
  - d. Very interested
  
4. Please provide an explanation for your level of interest.

\* All responses on this questionnaire are voluntary.

Appendix B  
Place-Based Art Education Workshop Post-Questionnaire\*

Name \_\_\_\_\_

1. To what extent have these workshops expanded your understanding of place-based art education?
  - a. Did not expand my understanding
  - b. Somewhat expanded my understanding
  - c. Expanded my understanding
  - d. Significantly expanded my understanding
2. What is your interest level in implementing place-based art education in your classroom?
  - a. Not interested
  - b. Somewhat interested
  - c. Interested
  - d. Very interested
3. Please provide an explanation for your level of interest.
4. In what ways, if any, is the “unit plan” that you created different from your previous approach to art curriculum?
5. How likely are you to use the “unit plan,” created in this workshop, with your students in the upcoming Fall semester?
  - a. Unlikely
  - b. Somewhat likely
  - c. Likely
  - d. Very likely

6. Please provide any additional information related to your plans for this “unit plan.”

\* All responses on this questionnaire are voluntary.

Appendix C  
Place-Based Art “Unit Plan”

Name \_\_\_\_\_ School \_\_\_\_\_

Big Idea: \_\_\_\_\_ Grade Level: \_\_\_\_\_

Essential Questions:

Understandings:

Artist(s) / Art Form(s) Studied:

Performance Tasks/Projects:

Unit Overview:

## Place-Based Aspects:

Engaging students in the **local context** (ex. outdoor education, field trips, guest speakers, interacting with natural items, etc.):

Engaging students with **local content** (ex. examining local social, political, economic, cultural, historical, and/or ecological issues; studying the local landscape or built environment; studying local artists or art forms; etc.):

## Promoting appreciation and care for place:

Engaging students in **impacting the local** community/environment:

## Cross-Curricular Connections:

## Rationale:

Appendix D  
Place-Based Art Education Unit Plan Rubric

Criteria	1	2	3	4
<b>1. Local content</b>	Does not identify any local content (including artists/art forms)	Does not identify any local content other than artists/art forms	Identifies at least one local issue/area of study that functions as secondary content	Identifies at least one local issue/area of study that functions as primary content
Local artists/art forms	Does not identify any artists/art forms OR intent to find one	Identifies an artist/art form that does not have ties to the local environment	Identifies an artist/art form (not local) whose work deals with issues of place	Clearly identifies local artist/art form or intent to find one
Inter-disciplinary	Does not identify any interdisciplinary connections	Identifies an interdisciplinary connection but little to no evidence exists in the plan	Identifies an interdisciplinary connection with some evidence of connection in plan	Identifies an interdisciplinary connection with clear evidence of full integration in plan
<b>2. Local context</b>	Does not employ any strategy to integrate the local context	Employs one strategy to integrate the local context	Employs two strategies to integrate the local context	Employs three or more strategies to integrate the local context OR makes significant use of two or more strategies

*Sequel to Appendix D see on the next page.*

*Sequel to Appendix D.*

Affective components (toward place)	Does not articulate any intent or methods of cultivating value for place	Vaguely specifies the methods used OR values gained	Vaguely specifies methods used AND values gained	Clearly specifies the methods used AND values gained during the unit
Transformative component (toward place & community)	No transformative component articulated	Transformative component vaguely articulated	Clearly articulated transformative component but it does not appear to be connected to the unit	Clearly articulated transformative component that is connected to the unit and impacts the local community/environment
Total				

# Preservice Teacher Perceptions of Preparedness to Teach in Inclusive Settings as an Indicator of Teacher Preparation Program Effectiveness

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## Abstract

This mixed methods study examined preservice teacher perceptions of their needs related to inclusion. The study examined 120 early childhood and elementary preservice teachers from two universities, from both general and special education programs. Inclusion has been considered best practice in education for many years; however, how to best facilitate inclusive practices to meet the needs of all learners remains an area of uncertainty for preservice teachers. Prior research has connected perceptions of preparedness to effective inclusive practices. A survey was developed and validated about inclusion and perceptions of preparedness to teach in an inclusive setting. The survey included both Likert-scale items and open response questions. Exploratory factor analysis was used to examine the structure of the survey. Descriptive statistics, analysis of variance, and multiple regression were used to examine the quantitative results. Responses to open-ended questions were coded to identify qualitative themes. The findings indicated that preservice teachers lacked a coherent understanding of inclusion and perceived themselves as needing additional development to be fully prepared to teach in an inclusive setting. The results suggest that teacher preparation programs need to provide a more coherent conceptual framework to guide the enhancement of both course and field work related to inclusion and effective inclusive practices.

*Keywords:* inclusion, teacher education, special education, students with disabilities.

## Introduction

The *Education for All Handicapped Children's Act* (EHA: PL 94–142, 1975) recognized that school-age children with disabilities are able to learn deeply and that a free and appropriate education (FAPE) can only take place in the least restrictive environment

(LRE). Harkening back to *Brown v. Board of Education* (1954), EHA defined the LRE as meaning that children with disabilities must be educated with their typically developing peers to the maximum extent possible (*inclusion* in general education classrooms).

Teachers need to have a favorable view of inclusion to be effective (Alur & Timmons, 2009; Singal, 2008), and their beliefs about inclusion are often the “key to the success of inclusive education programs” (Tiwari, Das, & Sharma, 2015, p. 129). Preservice teacher preparation experiences are the beginning of a life-long learning process in which teachers’ beliefs and perspectives begin to form (Flores, Santos, Fernandes, & Pereira, 2014). Helping preservice teachers form sustainable, favorable views of inclusion requires high quality class and field work. For example, experience with diverse learners, training/education, and support increase the likelihood that a teacher will form a favorable view of inclusion that can be sustained throughout their career (United Nations Educational, Scientific, and Cultural Organization (UNESCO), 2003). However, even after decades of efforts to foster inclusive learning environments, researchers have consistently found that early childhood and elementary preservice teachers in general education report feeling underprepared to foster meaningful inclusive experiences for children with disabilities (Abel, 2015; Allday, Neilsen-Gatti, & Hudson, 2013; Kiloran, Woronko, & Zaretsky, 2013).

The perceived level of preparedness of preservice teachers is consistent with the experience of in-service teachers. Peltier (1993) found that general education teachers frequently reported feeling unprepared to support students with various special needs. The assumption is often made that special education teachers have more experience and practice facilitating inclusion (Gehrke & Cocchiarella, 2013), but Peltier found that students with disabilities rarely received in-class support from a special education teacher, para-educator or a related services therapist. Furthermore, general and special education teachers seldom engaged in joint planning to make meaningful curricular modifications for students with disabilities (Hardman, Drew, & Egan, 2014). Similarly, Kraukle (2013) surveyed 194 preservice teachers (PSTs) about their perceived preparedness to work with children with special needs and their families and found that only 39% of the those surveyed felt confident about their inclusion skills. The consistency between pre- and in-service teacher perceptions of inclusion suggests that teacher preparation programs may be the lynchpin in improving teacher orientation toward inclusion. The lack of collaboration between general and special education teachers calls into question whether special education teachers actually feel better prepared to support inclusion.

The present study examined early childhood and elementary preservice general and special education teacher perceptions about their preparedness to work in an inclusive setting, comparing perceptions between grade levels and general/special education. Implications for improving teacher preparation programs were explored. The research questions were:

1. Across teacher education preparation programs (Early Childhood, Early Childhood Special Education, Elementary Education, and Elementary Special Education), is there a difference in preservice teachers’ perceived level of preparedness to work in an inclusive setting?
2. Is there a difference in the perceived level of special education preservice teachers to teach general education students and the perceived level of general education preservice teachers to special education students?

3. How can preparation programs more effectively develop preservice teachers' levels of self-efficacy related to inclusion?

Inclusion is defined in the present study as each student's least restrictive environment. Inclusion is regarded within the scope of FAPE, meaning that the appropriateness of every placement is determined through the Individualized Education Program (IEP) process and does not require that students with special needs are always placed in a general education classroom.

### **Theoretical Framework**

The present study is framed using Bandura's (1997) self-efficacy theory, in which he defined perceived self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). Teacher efficacy, originally conceptualized by Ashton (1985) as a teacher's beliefs in his or her capacity to positively influence student learning and achievement, has been associated with enhanced student achievement and autonomy, willingness to adopt new instructional strategies, and motivation to provide special assistance to low achieving students (Adeyoyin, 2010). Guskey and Passaro (1994) found that personal and teacher self-efficacy were not separate constructs but that self-efficacy could be organized by a sense of internal and external loci of control. The internal locus of control encompasses beliefs such as students performing better as a result of teacher efforts. The external locus of control, by contrast, attributes outcomes to factors beyond the teacher's control such as classroom resources and amount of training. Vaz et al. (2015) found that external factors explained nearly half the variance in teacher self-efficacy. Specifically, they found that more training to support inclusion was associated with a stronger sense of self-efficacy toward inclusion. They also found that other factors (e.g., gender, age) that influenced attitudes toward inclusion were associated with self-efficacy toward inclusion.

The present study therefore focused on associations of preservice teacher preparation programs, an external locus of control, with self-efficacy toward inclusion. Efficacy beliefs are shaped early during teacher preparation and development (Hoy & Spero, 2005). Bandura (1997) also suggested that the development of self-efficacy beliefs among novice teachers is most vulnerable to change during the early learning years. Current research provides evidence of the positive influence of teacher self-efficacy on attitudes towards inclusion for children with special needs (Urton, 2013). Teachers with positive self-efficacy tend to also have positive attitudes about collaborating with other specialists from the student's educational team (Damasco, 2013). Moreover, teachers with a strong sense of self-efficacy hold more positive attitudes towards educational reform and applying new guidelines (Urton, 2013). Research has shown that the optimum time to help teachers form positive attitudes about inclusive education is during pre-service training (Ajuwon et al., 2012).

Preservice teachers' perceptions of preparedness are associated with their beliefs about their abilities as well as their responsibilities as both a pre-service and in-service teacher (Gorski, Davis, & Reiter, 2012; Darling-Hammond, Chung, & Frelow, 2002). Research has demonstrated that PSTs with high levels of self-efficacy are more likely to achieve at higher levels, that is, helping students learn better, spending additional time

planning lessons, and working with students to address individual needs (Schunk, Pintrich, & Meece, 2008). These types of teaching behaviors are exactly the types of outcomes necessary to successfully teach in an inclusive classroom.

Although PST attitudes toward children with disabilities are generally positive, research suggests that PSTs may still have uncertainties about inclusion (Berry, 2010; Gehrke & Cocchiarella, 2013; Hadadian & Chiang, 2007). Hadadian and Chiang (2007) surveyed both general education and special education preservice teachers and found that 88% of the preservice teachers in their sample felt strongly that students with disabilities should be educated with their typically developing peers; thus, attitudes about the inclusion of children with disabilities in general education programs may have positively shifted in terms of an improved sense of belonging. Hadadian and Chiang also reported, however, that 44% of that same sample felt that students with disabilities create undue burden on the general educator. This perceived undue burden may stem from a lack of teacher preparedness, and if so, indicates that institutions of higher education need to take more explicit action to help PSTs prepare to teach in inclusive settings.

The current standards set forth by The Council for the Accreditation of Educator Preparation (CAEP, 2013) do not include a requirement for training in special education or with diverse learners. States vary widely in their requirements for preparing teachers to meet the needs of students with special needs – some require coursework while others only require that particular knowledge and skills in this area be developed without specifying how they should be developed (Boccala, Morgan, Mundry, & Mello, 2010). Shade and Stewart (2001) found that such wide variation is highly problematic for teacher preparation and that even just one introductory course in special education improved perceived levels of preparedness. Most college and university teacher preparatory programs do require at least one course in special education for the general education certification track (Hemmings & Woodcock, 2011).

One course in special education has been found to be helpful in improving attitudes toward students with disabilities (McCray & McHatton, 2011). One course, however, has been found to be insufficient to fully prepare teachers with the knowledge and skills needed to individualize instruction (Cameron & Cook, 2007) and field experiences have been found to have a positive impact (e.g., Jung, 2007; McCray & McHatton, 2011).

Special education preservice teachers also report feeling underprepared to successfully meet the challenges of students with disabilities. Research on exemplary teacher education programs in both general and special education has demonstrated a need for “experiences focused on diversity, with special education faculty placing greater emphasis on students with disabilities” (Brownell et al., 2005, p. 247). Gehrke and Cocchiarella (2013) found that PSTs working toward dual certification in elementary and special education did not feel prepared to handle the demands of inclusion, citing lack of guidance from field supervisors and an inability to bridge the gap between theory and practice as two main reasons. The work of Gehrke, Cocchiarella, Harris and Puckett (2014) further substantiated the purported disconnect between pedagogical knowledge and actualization of inclusive practices. PSTs in their study reported a strong legal foundation regarding inclusion and LRE entitlements; however, the PSTs cited lack of opportunity to see inclusion fully operationalized in field placements as a reason for perceived lack of preparedness.

The disconnect between theoretical preparation and actual application highlights the importance of preparation programs that address not only the theoretical constructs of inclusion but also the knowledge and skills needed to successfully meet the needs of students in an inclusive environment.

The present study addressed this need by examining PSTs' perceptions about inclusion during two preparation programs in which the theoretical aspects of inclusion were supplemented with a field experience component. The field experience component required the PSTs to work with students with special needs in either general or self-contained classrooms.

### **Methods**

This mixed methods study examined preservice teacher perceptions about their preparedness to work in an inclusive setting, comparing early childhood and elementary grade levels and general/special education. A triangulation mixed methods design was used, in which different but complementary data were collected on the same topic (Creswell & Plano Clark, 2007). Quantitative data from an online survey were used to compare preservice teacher perceptions of their preparedness to work in an inclusive setting by grade level and general/special education (Research Question 1). Quantitative data from the online survey were also used to compare the degree to which special education preservice teachers felt prepared to teach general education students to the degree to which general education PSTs felt prepared to teach special education students (Research Question 2). Qualitative data from the online survey were used to explore what factors preservice teachers perceive as preparing them to teach in an inclusive environment, their concerns about teaching in an inclusive environment, and what support they perceive as necessary to ensure the success of all the learners in their classroom (Research Question 3). Collecting both quantitative and qualitative data brought together the strengths of both forms of research to merge results during interpretation.

### **Participants**

Participants consisted of general and special education PSTs preparing to teach early childhood (Grades PreK-3) and elementary grades (Grades 1-6) in two public universities in the middle Atlantic region of the United States. At the time of data collection, the two universities served a population of 206 early childhood and elementary PSTs for both general and special education. All 206 PSTs were invited to participate in the study.

A total of 120 PSTs agreed to participate (all female). Of the 120 participants, 29 were preparing to teach early childhood, 18 general and 11 special education; 87 participants were preparing to teach elementary, 49 general and 38 special education; and, 4 participants did not indicate their major. The majority of candidates (86% of the 120 participants) reported having some experience working with individuals with special needs. The average number of courses taken related to working with individuals with disabilities was 4.4, and all participants had completed a minimum of one course related to working with children with special needs.

### Missing Data

Of the 120 participants, 65 (54.2%) had complete data. One item had complete data (Number of courses taken related to children with special needs and/or inclusion). Academic level had nearly complete data (99% response rate), as did academic major (97%) and prior experience with special needs and/or inclusion (97%). The remaining six qualitative questions had lower response rates, ranging from 59% to 63%. The seven quantitative items all had a 63% response rate ( $N = 76$ ). All participants who skipped a quantitative item also skipped the rest of the quantitative items (unit non-response rather than item non-response). No discernible patterns were apparent in the missing responses by major or academic level. Listwise deletion was used for all quantitative analyses because sufficient sample size and auxiliary variables were not available for imputation methods that are valid for unit non-response (e.g., hot deck imputation as in Andridge & Little, 2010).

### Instrumentation

An online survey consisting of Likert scale and open ended questions along with demographic information was developed by the researchers. The survey was developed from literature reviews on teachers' perceptions of inclusion and preparedness. To increase validity, the literature review was supplemented with PST interviews. During these interviews, the researchers facilitated informal conversations about their preparation for inclusive classrooms using a draft list of possible questions. The interviews focused on question comprehension and prior knowledge to provide a reasonable response, as recommended by Fowler and Cosenza (2008). Using information from the literature and interviews, the preliminary survey was developed and then reviewed by three experts in special education, inclusion, and survey development. It was then piloted with a small group of 23 early childhood and elementary general and special education PSTs from the two participating institutions. Following the pilot, minor changes such as question rewording for clarification were made before it was distributed. The final instrument was then distributed to all possible respondents via Survey Monkey. Follow up emails were sent three and six weeks later to encourage additional participation. The decision to use a web-based survey was based on the technology available to the population (Alreck & Settle, 2004). No incentives were given for participation. The distribution and follow up resulted in a 56% return rate, which is comparable to response rates found by Guo et al. (2016) and was deemed sufficient to make generalizations about the teacher preparation programs.

The survey consisted of 17 questions. Four questions were demographic. Six questions were open-ended and addressed PST perceptions about how well they were prepared to teach in inclusive settings. One question examined the degree to which the PSTs agreed that their university coursework had prepared them to work in inclusive settings. Six questions used a five point Likert scale to examine PST beliefs about inclusion. Each Likert-type item contained an opposite to control for survey bias, for example, "Children with special needs receive a better education in inclusive settings" and "Children with special needs receive a better education in special education settings."

The internal consistency was sufficient for the six quantitative questions,  $\alpha = .715$ . A principal component analysis (PCA) was conducted to identify a valid and reliable

factor structure. Varimax and Promax rotation were compared and produced the same factor structure and factor loadings. For simplicity, only the Varimax solution is provided (Table 1). The initial solution based on the Kaiser criterion (eigenvalues > 1) had two factors and accounted for 61.5% of the variance. A scree plot leveled off after two factors, corroborating the initial solution.

Table 1  
*Factor Loadings from Rotated Component Matrix for Two-Factor Solution*

Question	Prompt	Component	
		1	2
Q12	Children with special needs receive a better education in inclusive settings	<b>.712</b>	.356
Q13 <sup>a</sup>	Children with special needs receive a better education in inclusive settings	<b>.689</b>	-.071
Q14	Children without special needs benefit from inclusive settings	<b>.799</b>	.117
Q15 <sup>a</sup>	Children without special needs are harmed by inclusion	<b>.635</b>	.191
Q16	The general education teacher is responsible for facilitating inclusion in the classroom	.393	<b>.689</b>
Q17	The special education teacher is responsible for facilitating inclusion in the classroom	-.049	<b>.924</b>

Note. Bold numbers indicate the highest factor loadings for each question.

<sup>a</sup> Questions 13 and 15 were reverse coded so that higher values indicated more positive beliefs about inclusion.

The four items that correlated most strongly with Component 1 examined PST beliefs about inclusion. The two items that correlated most strongly with Component 2 examined PST beliefs about who is responsible for facilitating inclusion in the classroom. A parallel analysis was conducted with 1000 sets of random data to help determine the number of factors to retain. Parallel analysis identifies the number of factors that would emerge with random data and often provides a more restricted view of the number of factors to retain than the Kaiser criterion (O'Connor, 2000). The parallel analysis showed that the second factor from the initial solution had a slightly lower eigenvalue than the second factor from the parallel analysis (1.118 vs. 1.154, respectively). A one factor solution was therefore examined but only accounted for 43% of the variance. Connections to theory must be considered in decisions regarding factor structures (Byrne, 2012). The one factor solution did not differentiate between beliefs about the benefits of inclusion and the responsibility for inclusion, an important theoretical difference that was purposefully built into the instrument. The decision was made therefore that the initial two-factor solution was the strongest representation of the underlying theory. The strong factor loadings, which also represent the correlations of the questions to the components in Varimax rotation, indicate strong convergent validity of the questions within each component. The weak correlations of the questions with the other component (non-bold numbers in Table 1) indicate strong discriminant validity of the questions between components. Overall, the conclusion was that the quantitative questions showed strong construct validity using the two factor solution.

## Results

### Demographic Analysis

The demographic questions examined participants' major, academic status, and number of courses taken related to working with students with special needs. Table 2 provides a breakdown of the number of participants by major and academic level.

Table 2  
*Number of Participants by Major and Academic Level*

Academic Level	Major				Academic Level Total
	ECE	ECSE	ELEM	ELSE	
Sophomore	0	0	1	0	1
Junior	3	2	18	20	43
Senior	11	9	27	17	64
Graduate	5	0	5	1	11
Missing	0	0	1	0	1
Major Total	19	11	52	38	120

Note. All participants were female. ECE = Early Childhood General Education. ECSE = Early Childhood Special Education. ELEM = Elementary General Education. ELSE = Elementary Special Education.

All candidates were enrolled in early childhood, early childhood special education, elementary education, and elementary special education at one of two universities in the Middle Atlantic region of the United States. The number of courses related to teaching children with disabilities ranged from one to 20 (Mean = 4.4, SD = 4.4). The majority of participants reported some previous experience working with individuals with special needs. The ranges of experiences varied from “none” to “babysitting”, to working in a special education setting as a teacher or paraprofessional.

### Perceived Levels of Preparation to Work in an Inclusive Setting

Component 1, PST beliefs about inclusion, was measured by four items in the survey. Inclusion averages (Table 3) were compared across preservice teacher education programs, early childhood (ECE), early childhood special education (ECSE), elementary (ELEM), and elementary special education (ELSE). Although the ECE inclusion average was significantly greater than ELEM ( $p = .030$ ) and ELSE ( $p = .028$ ), the overall analysis of variance failed to support the conclusion that the inclusion averages were statistically significant between programs,  $F(3, 76) = 1.977, p = .125$ .

Table 3  
*Inclusion Average by Program*

Major	N	Mean	SD
ECE	11	3.00	0.65
ECSE	5	2.70	0.33
ELEM	32	2.50	0.79
ELSE	28	2.48	0.48
Total	76	2.58	0.66

### Relationship of Beliefs about Inclusion and Responsibility for Facilitating Inclusion

Component 2, beliefs about the locus of responsibility for facilitating inclusion in the classroom, was measured by two items. These two items were strongly correlated with the underlying component (see Table 1). A simple regression model was used to determine the degree to which Component 2 (*responsibility average* in Equation 1) predicted Component 1, (*inclusion average* in Equation 1).

$$\text{Inclusion Average} = 1.522 + 0.347 (\text{Responsibility Average}) \quad (1)$$

The regression coefficient for responsibility average was statistically significant,  $p = .001$ . Based on the  $R^2$  value, *responsibility average* predicted 13.1 percent of the variance in the *inclusion average*.

The two items within Component 2 were moderately correlated with each other,  $r = .425, p < .001$ . A stepwise multiple regression model was used to determine whether one of the beliefs about responsibility (Component 2) were more strongly associated with positive beliefs about inclusion (Equation 2).

$$\text{Inclusion Average} = 1.290 + 0.408 (\text{General Ed Teacher}) + 0.018 (\text{Special Ed Teacher}) \quad (2)$$

The special education teacher term was not statistically significant and was therefore excluded from the model ( $p = .692$ ). The resultant model suggested that believing the general education teacher to be responsible for facilitating inclusion predicts more positive beliefs about inclusion,  $F(1, 75) = 17.858, p < .001$ . Based on the  $R^2$  value, believing that the general education teacher is responsible for facilitating inclusion predicted 19.4 percent of the variance in the inclusion average, approximately 6% more of the variance than the overall responsibility average (Component 2).

Beliefs about who is responsible for facilitating inclusion were also compared across majors (Table 4). Although ECE preservice teacher beliefs about general education teacher responsibility were significantly higher than ELEM ( $p = .021$ ) and ELSE ( $p = .017$ ), differences in beliefs about the responsibility of the general education teacher across programs approached statistical significance,  $F(3, 76) = 2.443, p = .071$ . Beliefs about the responsibility of the special education teacher were not statistically significant across programs,  $F(3, 76) = .313, p = .816$ . Taking both items into account, the multivariate test indicated near statistical significance, Wilks' Lambda = 0.845,  $F(6, 142) = 2.078, p = .059$ .

Table 4

*Descriptive Statistics for Beliefs about Responsibility for Facilitating Inclusion by Major*

Item	Major	N	Mean	SD
The general education teacher is responsible for facilitating inclusion	ECE	11	3.64	0.505
	ECSE	5	3.40	0.548
	ELEM	32	3.06	0.669
	ELSE	28	3.04	0.793
	Total	76	3.16	0.713
The special education teacher is responsible for facilitating inclusion	ECE	11	2.73	1.009
	ECSE	5	3.00	0.707
	ELEM	32	2.91	1.058
	ELSE	28	3.04	0.744
	Total	76	2.93	0.914

### Preservice Preparation Program Supports for Facilitating Inclusion

Six open-ended questions examined PST beliefs about the aspects of their preparation program that supported their ability to facilitate inclusion. Data from these questions were coded into thematic categories that emerged from the data. Researchers first coded the data by organizing and arranging the data (Creswell, 2003) in a way that facilitated ease of data access (Merriam, 2009). Data were then reexamined to ensure that researchers fully understood the responses (Creswell, 2003). The next step was an analysis using a basic coding system developed from an initial examination of the responses. Data were then reduced into themes that emerged from the initial coding (Creswell, 2003). A second rater was asked to examine the responses independently, and consensus was reached on the first round of coding.

The first question asked PSTs to define inclusion in their own words. This question yielded 74 responses. When coded for themes, all 74 responses fit into the general theme of “including special education students in general education classes.” Only three PSTs, however, defined inclusion more specifically with consideration of individual needs, and no respondents mentioned the Least Restrictive Environment (LRE). For example, one early childhood special education PST defined inclusion as “*Including students of all abilities in the same learning environment*” while an elementary PST stated that inclusion is “*Including students with special needs, language barriers, or other differences in regular classroom instruction, without pulling them out.*” Overall, the most notable theme from this question’s responses was that the PSTs did not have a clear or coherent understanding of what inclusion means or of the complex factors that contribute to making an inclusive setting effective for all students.

The second question posed was: “*What has prepared you to teach in an inclusive classroom?*” This question yielded 75 responses, which were coded and categorized into the themes. Of the 75 responses, 24 answers contained information that fit into two categories and therefore received two codes for a total of 99 responses. Results are reported in frequencies and displayed in Table 5. Respondents most frequently reported that their coursework and internship experience were most valuable in preparing them to teach in inclusive settings. This belief was constant across program types. For example, an elementary general education PST stated that she was prepared because of, “*Practice with inclusion at my phase 1 internship, shadowing a special educator as a part of my phase 1 assignments, and classes on special needs and inclusion.*” This was similar to an early childhood special education candidate who reported that his/her “*classes and field placement*” had provided the most preparation. Frequencies and codes are displayed in Table 5.

Table 5  
Codes and Frequency of Responses: “*What Has Prepared You to Teach in an Inclusive Classroom?*”

Theme	Number of Responses	Percentage
Coursework	51	52%
Internship Experience	36	36%
Personal Experience	6	6%
Personal Knowledge	3	3%
Unknown	1	1%

After examining what PSTs feel they need to be prepared for inclusive settings, the third question was: “*What concerns do you have, if any, about teaching in an inclusive setting?*” Four of the 76 responses contained information that fit into two categories and therefore received two codes for a total of 80 responses. The most frequently occurring theme was meeting the ‘diverse needs’ of students; however, 15% of respondents did report that they were concerned about being ‘fair’ to all of the students and not focusing or spending too much time with a particular group. These two themes were not combined as many PSTs reported that they were specifically concerned about meeting the specific educational needs that result from having a disability. An elementary special education major stated that she was concerned about “*ensuring that all students learn to their maximum capacity, both those with and without special needs*” while an elementary education general education PST stated “*I am worried I won’t give every student what they need.*” Across programs, candidates reported concerns with classroom management preparation. Table 6 presents the frequency of responses for each theme.

Table 6

*Themes and Frequency of Responses: “What Concerns Do You Have, if Any, About Teaching in an Inclusive Setting?”*

Theme	Number of Responses	Percentage
Classroom Management	7	9%
Diverse Needs	22	28%
Student Perceptions	4	5%
Collaboration	1	1%
Assistance	7	9%
Knowledge	7	9%
Equity	12	15%
Other Responsibilities	3	4%
Administrative Support	1	1%
Inappropriate Placements	6	8%
None	1	1%

The fourth question was: “*What do you feel you need to be better prepared to teach in an inclusive setting?*” This question yielded 75 responses, 10 of which contained information that fit into multiple codes for a total of 85 codes. More than half of the candidates reported that they needed ‘more experience in inclusive settings.’ This response was consistent across programs. An elementary special education major stated, that she needed “*firsthand experience*” in order to be better prepared while an early childhood general education candidate reported that she would benefit from “*a mini-placement where I could observe an experienced teacher in action for several days*”. Table 7 presents the frequency of responses for each theme.

Table 7

*Themes and Frequency of Responses: “What Do You Feel You Need to Be Better Prepared to Teach in an Inclusive Setting?”*

Theme	Number of Responses	Percent
Management	10	12%
Experience	43	54%
Coursework	10	13%
Modeling	6	8%
Resources	7	9%
Differentiation Training	7	9%
Acceptance	1	1%
None	1	1%

The survey yielded 84 responses to the fifth question: ‘*What do you feel you need to ensure the success of students without disabilities?*’ Nine of the responses produced multiple themes. The most frequently occurring theme was differentiation training. An early childhood special education candidate reported that she felt “*more strategies about modifying work to make it more advanced*” were needed. However, 19% of students also reported that knowing how to set an inclusive classroom environment to prepare the students was important. Additionally, experience in inclusive settings was also noted by 8% of the PSTs. Table 8 presents the frequency of responses for each theme.

Table 8

*Themes and Frequency of Responses: “What Do You Feel You Need to Ensure the Success of Students without Disabilities?”*

Theme	Number of Responses	Percentage
Student Preparation	16	19%
Testing	1	1%
Collaboration	4	5%
Background	2	2%
Resources	7	8%
Good Teaching	2	2%
Differentiation Training	27	32%
Experience	7	8%
Parent Cooperation	1	1%
Administrative Support	4	5%
Classroom Space	1	1%
Assistance	2	2%
Classroom Management	1	1%
Unknown	3	4%

The sixth and final qualitative question was: “*What do you feel you need to ensure the success of students with disabilities?*” This question yielded 81 responses, and the most frequently occurring theme once again was differentiation training. However, this time PSTs also noted that curricular resources and additional adult support were necessary. An elementary special education candidate noted that she perceived needing “*classes that cover strategies of how to do this and support from teacher assistants and adminis-*

trators.” This perception was echoed by an elementary general education who stated she needed “more of the extra materials and time, as well as another teacher to assist the student and stay close by” to ensure students with special needs were properly included. Table 9 presents the frequency of responses for each theme.

Table 9  
*Themes and Frequency of Responses: “What Do You Feel You Need to Ensure the Success of Students with Disabilities?”*

Theme	Number of Responses	Percentage
Student Preparation	5	6%
Co-Teacher	3	4%
Background	3	4%
Resources	11	14%
Differentiation Training	32	40%
Experience	5	6%
Parent Cooperation	2	2%
Administrative Support	7	9%
Assistance	10	12%
Planning	1	1%
Placement	1	1%
Unknown	1	1%

## Discussion

The present study examined PST beliefs about inclusion to determine the degree to which they perceive being prepared to facilitate inclusion and to examine which aspects of the teacher preparation are most relevant to enhancing their preparation. Previous research (see Vaz et. al, 2015) has demonstrated that better preparation and more robust experiences increase the self-efficacy of PSTs related to inclusion. The study examined three research questions that examined the differences in the perceived preparedness of PSTs from four different teacher preparation programs (early childhood general and special education and elementary general and special education) and how to increase self-efficacy related to inclusion in PSTs.

The first research question examined differences in PSTs’ perceived level of preparedness to work in an inclusive setting. ECE and ECSE teachers demonstrated the highest and second highest overall scores respectively (see Table 3), which is consistent with findings from Frankel, Hutchinson, Burbidge and Minnes (2014). Early childhood PSTs (ECE and ECSE) may perceive themselves as slightly better prepared to teach in inclusive settings. This finding must be considered, however, in light of the other finding that the majority of the PSTs had an incomplete understanding of the meaning of inclusion. These results suggest that the PSTs may not have a solid foundation from which to base perceptions of their preparedness. Preservice education programs may therefore need to consider ways to more explicitly and coherently integrate preparation for inclusion, both through coursework and field experiences. The development of a coherent conceptual framework for inclusive practices may be one way to begin such enhancements (consistent with recommendations from Saderholm et.al, 2016).

Previous research has demonstrated that special education PSTs do not feel adequately prepared for inclusive settings (see Brownell et al., 2005). This links to the second research question, *Is there a difference in the perceived level of special education PSTs to teach general education students and the perceived level of general education PSTs to special education students?* As noted above, there is not a statistical difference; however, to teach further examination may be needed to compare early childhood PSTs (general and special education) to elementary PSTs (general and special education). The results of the study do suggest that it is the belief that the general educator is responsible for facilitating inclusion that correlate with higher levels of self-efficacy related to inclusion, but it raises the question of whether special education PSTs would have higher self-efficacy related to inclusion if they perceived responsibility for its facilitation.

The results of the qualitative questions may suggest that developing PSTs' self-efficacy related to inclusion is multifaceted. Overall, the most frequent perceived need was more opportunities and experiences. The results also suggest that experiences and internships in classroom with strong general educator input into the inclusive program are more effective. Another area where PSTs perceive needing support is in the area of differentiation, especially as it relates to meeting the needs of children without disabilities. As teacher educators frame their programs, this study suggests that more internship experiences in inclusive settings, with rich opportunities to differentiate instruction for all learners are needed. PSTs perceive needing additional experience working in inclusive settings in order to differentiate instruction. This perception aligns with previous research on in-service teachers (Tiwari et al., 2015, p. 129; Alur & Timmons, 2009; Singal, 2008) and indicates this as a critical area that teacher preparation programs need to address.

The findings suggest that PSTs in both general and special education programs need experience in rich, inclusive environments and more instruction and practice with differentiation. This aligns with research done by Colson et.al. (2017) in which PSTs with longer internship placements felt more prepared to engage students. This finding is particularly interesting because the assumption is often made that special education PSTs have more experience and practice facilitating inclusion, yet the results of this study, and previous research (Gehrke & Cocchiarella, 2013; Gehrke, Cocchiarella, Harris and Puckett, 2014) indicate that PSTs do not perceive being well prepared. Better preparing PSTs' views on inclusion is how we may potentially increase their levels of self-efficacy related to inclusion.

### **Limitations**

The present study was conducted in the mid-Atlantic region with teacher preparation programs at two universities, one classified as an R2 (Doctoral universities – higher research activity) and the other as an M1 (Master's colleges and universities – larger programs). The study participants were only early childhood and elementary PSTs. The number of missing responses and small sample sizes limited the statistical power of the quantitative analyses. To the extent that the universities' teacher preparation programs are representative and the participants' perceptions are similar to other PSTs, the results are generalizable.

### Implications for Teacher Preparation

The results of this study suggest that changes are needed in teacher preparation programs related to sustainable inclusive practices. For example, teacher preparation programs accredited or seeking accreditation by CAEP must attend to the Council of Chief State School Officers' (CCSSO) Interstate Teacher Assessment and Support Consortium (InTASC) standards (see CAEP, 2013, standard 1.1), which specify in several performance standards that new teachers must attend to individual learner differences in a variety of ways, for example, Standard 2b states, "The teacher makes appropriate and timely provisions (e.g., pacing for individual rates of growth, task demands, communication, assessment, and response modes) for individual students with particular learning differences or needs" (CCSSO, 2011, p. 11). Preparing teachers to teach in inclusive settings is implicitly bound up in these standards. Including explicit language targeting inclusion preparedness could encourage teacher education programs to incorporate inclusion theory into their conceptual frameworks. A more coherent conceptual framework that incorporates inclusion explicitly may improve teacher preparation by focusing all stakeholders on the "same critical components, strategies and outcomes," as recommended by Saderholm et al. (2016, p. 27) and Driskell et al. (2016).

Such enhanced conceptual frameworks are important because PSTs in both special and general education programs in the present study reported needing more experiences in inclusive settings. These frameworks should extend across programs and include special education because although those PSTs reported feeling prepared for special education (self-contained) settings, they, along with general education PSTs, did not feel prepared to teach in inclusive settings. Enhanced conceptual frameworks that focus on inclusion draw explicit attention to the need to provide more and better field experiences in inclusive settings to complement the theoretical basis for inclusion provided in coursework.

### Implications for Future Research

The number of high scores on questions relating to opinions of inclusion indicates that PSTs have generally favorable opinions about inclusion; however, the qualitative results indicated that they need stronger training and experiences working in inclusive settings. The need for better preparation is particularly evident in the inconsistent inclusion definitions provided by the PSTs. One particular area where further study is needed is whether PSTs would feel more prepared if they had *explicit* instruction in and exposure to students with diverse needs. Additionally, do PSTs from states requiring more experience learning about and working with diverse learners perceive higher levels of preparedness?

Another question raised by this research is why PSTs from early childhood and early childhood special education perceive their preparedness more favorably than their elementary counterparts and whether those differences are sustained throughout their careers. Is it that the "culture" of early childhood is more inclusive than that of elementary and upper grades, or is early childhood teacher preparation different in some fundamental way from elementary teacher preparation? If this is in fact the case, what is it about early childhood teacher preparation that creates a more inclusive culture? As schools continue to become more inclusive the need to properly educate PSTs becomes more critical. These questions guide us to the next steps in understanding how to achieve the goal of sustainable inclusive teaching.

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## Sustainability in English Academic Writing: The Binary Dilemma on Pronoun Utilization

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### Abstract

Discussion on sexism regarding language focuses on how women are discriminated against in our daily language and in academic writing. Although we are against any kind of discrimination, when it comes to dealing with this phenomenon in language and language use, we should be more careful. Language is not only a symbolic means whereby humans interact, it is also a product of human intellectual activity imbued with various experiences of our past and recent ancestors. Thus, it is also a reflection of our society's conceptual system through which we interpret physical and mental phenomena. In this paper, we have analyzed views regarding sexism and language; tried to display how improving the so-called injustices in language would result in some dire situations which may have never been foreseen. We finally put forth our own solutions to overcome the problems of sexism in academic writing.

*Keywords:* sustainability, sexism, academic writing, truth, gender, language use.

### Introduction

This article does not deal with *Man* or *man*. By all means, it agrees with almost anything stated by Miller and Swift (2001) in their work on non-sexist language, and most parts of the guidelines proposed by the American Psychological Association in this issue. However, interference in historical change of the language, as most of us know, may go to the extreme, which in the end, may result in complications in writing, and we particularly mean academic writing. Such that, we begin to see the individual losing identity; the *student* becomes neither 'he' nor 'she', and this goes for almost any profession, and yet we all know the very person we are referring to, from a binary perspective, is either a 'he' or a 'she', since even a Lesbian, Gay, Bisexual, Transgender (LGBT) would prefer either. We refrain from making such a reference for fear of offending the other sex, and by doing so, in our opinion, we repudiate, neutralize, and even, in the long run, obliterate the existence of each as an individual, utterly unique in a universe where singularity rules and, as the physical world shows us, no two entities are identical to each other.

In a viva, a member of the examining committee, referring to Prof. Dr. Elaine Tarone, to our surprise then, used the masculine pronoun, and this passed unnoticed until the session came to an end. This may seem to be a trivial incidence, yet at a larger scale, one can imagine thousands of such cases reserved not only to the spoken but the written language as well. Numerous scientific articles published in prestigious journals annually are abundant with such mishaps. Who is to blame: the reviewers who are now facing an incredible number of writers with unfamiliar names from different nationalities across the globe? The existence of unisex names in the English speaking world, where 'Chris' is either a male or a female? Or, the guideline developers who *push* writers to go 'non-sexist' depriving them of the opportunity to express their genders? The problem exists, and alas is exacerbating. Unless something is done about it, the reader will have no clue of the author's gender whose work he reads, and will probably commit the sin of ignorance by referring to 'Alex', 'Morgan', 'Tracy', etc., as either 'he' or 'she', both in speaking and in writing.

### Methodology

Somekh et al. (2005) differentiate between pure, action and applied research methods. To them pure research is 'intended to lead to theoretical development: there may, or may not, be any practical implications of this. Results are disseminated through academic media' (p. 11). In line with the definition above we tried to conduct a pure research and as with the publication manual writers we aimed to guide potential authors on a certain aspect of the writing process giving specific alternatives regarding the word choice to reduce bias in language. Thus this study is of a theoretical and conceptual nature.

### Sexism in Language and Education

The key words sexist language produces nearly 4.380.000 results in Google; however, when the search is conducted using quotation marks, the figure is reduced down to around 270.000. At first sight, those of us looking at this figure might be tempted to view this figure as minutiae as how many angels can dance on the head of a pin. This figure, however, is quite misleading if one would wish to comprehend the magnitude of the issue. Despite its relatively small representation in the virtual realm, sexist language use or the challenge against the use of sexist language is one of the hottest issues among researchers in the academic world as well as it is among lay people.

The issue of how to refer to people whose gender does not become clear through the use of such pronouns as *anyone*, *someone*, etc. has had a long history in the English language. Among the three alternative forms which existed in English for a sex-indefinite referent ('he' or 'she', 'they', and 'he'), past and present prescriptive and descriptive grammarians of English reveal differing tendencies. Generally, one of the three alternatives has been selected as 'correct' while the other two have been proscribed without any rational, objective basis for this choice. So it appears that the choice of the grammarians has been dictated by an androcentric world-view; linguistically, human beings were to be considered male unless proven otherwise (Bodine, 1975).

As sensational as the claims of Bodine are, they are supported by some empirical findings. For example, Gastil (1990) investigated the propensity of the generic *he* to evoke images of males relative to *he/she* and the plural *they*. The researcher had some

undergraduates read sentences aloud and verbally describe the images that came to their minds. Not surprisingly, the author found that *he* evokes a disproportionate number of male images and that while the plural *they* functions as a generic pronoun for both males and females, males may comprehend *he/she* in a manner similar to *he*.

When we wonder how people (mainly women) have become so frustrated with the way genders are represented within the language system, we also come into grips with the motivations underlying the efforts urging a change not only in our linguistic system, but also, at least as we believe, the way we perceive reality and convey it through language. Pauwels (2003) identifies three sources of motivation among this multitude of opinions and views regarding to change sexist practices: (1) a desire to expose the sexist nature of the current language system; (2) a desire to create a language which can express reality from a woman's perspective; or (3) a desire to amend the present language system to achieve a symmetrical and equitable representation of *women* and *men*.

As far as our discussion is concerned, the first source of motivation does not render any problems; the second and the third, however, have their potential threats in a number of ways. For one thing, trying to create a language which can express reality from a woman's perspective rather than from a man's perspective will only cause new misrepresentations in the language which many women complain most of the languages of the world are afflicted with. For another, the conceptual system reflected in a language is the product of several thousand years of humanity. For example, the Turkish language does not have any articles indicating gender or the third person singular pronoun in Turkish can refer to *males*, *females* and/or non-living organisms which are in most languages labelled as neutral nouns. Then, should we, as speakers of Turkish, try to find or invent any new category in pronouns in which there would be three third person pronouns to refer to the three types of nouns. To give another example, most nouns that refer to occupations or animals in Turkish are gender free; therefore, Turkish speakers use *male* or *female* as an attributive adjective to refer to the gender of a person who performs a particular job, or to refer to a particular animal.

Lakoff (1973) in her discussion on 'woman's language' which means both language restricted in use to women and language descriptive of women alone deplores the fact how woman's language submerges a woman's personal identity, by denying her the means of expressing herself strongly and how strong expression of feeling is avoided, expression of uncertainty is favoured, and types of utterances which are deemed trivial regarding to a subject matter are elaborated in woman's language.

From a feminist perspective, Lillian (2007) draws our attention to the difference as to how, on one hand, sexist discourse, and on the other, how racist, classist and homophobic discourses have been treated for the last three decades during which those four discourse types have been well documented. To Lillian, while racist and homophobic discourses constitute hate speech, but, with the exception of a few very specific forms of discourse (rapists' narratives, some anti-abortion discourse, and most notably, pornography), sexist discourse has either been ignored in discussions of hate speech or else dismissed as not instantiating hate speech. Lillian is frustrated by the fact that even feminist scholars are reluctant to categorize sexist discourse as hate speech. She believes the reason underlying this difference between how sexist and other discriminating discourses have been treated is that sexism has been rendered 'invisible' both by the dominant patriarchy and, ironically, by third-wave feminism itself. The figure which we quoted at the beginning of this section also seems to support Lillian's position.

Although Strunk and White (2005) make a strong case for the use of *he* as a generic pronoun arguing that *he* as a pronoun used for both genders is simple and practical, and that it is rooted in the very beginnings of the English language, many writers find the use of this generic pronoun rather limiting or offensive. Therefore, for Strunk and White, substituting *he* or *she* in its place is the logical thing to do if it works; yet, most often it does not, “if only because repetition makes it sound boring or silly” (p. 89). While the argument is as hot as ever, we in this study offer another alternative for the use of generic and non-generic pronouns for those who feel discomfort and a pertaining negative effect on his intrinsic motivation when teaching English.

1. Where the work has one author:
  - a. If author is male, pronoun is ‘he’.
  - b. If author is female, pronoun is ‘she’.
2. Where the work has two authors:
  - a. If first author is male, pronoun is ‘he’.
  - b. If first author is female, pronoun is ‘she’.
3. Where the work has two or more authors of the same gender:
  - a. If all authors are males, pronoun is ‘he’.
  - b. If all authors are females, pronoun is ‘she’.
4. Where the work has more than two authors of different genders:
  - a. If majority number of authors is males, pronoun is ‘he’.
  - b. If majority number of authors is females, pronoun is ‘she’.

Sexist language, that is expressing bias in favour of one sex (which is mostly a bias for males) and treating the other sex discriminately affect not only our daily discourses but also classroom environments. Nearly all countries around the world have racial and gender related problems. One such country in the world which is notorious with race problems is undoubtedly the United States. In an article published by Rakow (1991) it is stated how white males are dissatisfied in a classroom setting:

*Not surprisingly, however, it is white males who most object to being decentered in the classroom. The introduction of discourses that place women and racial minorities as subjects and that permit the possibility for women and racial minorities in the classroom to speak in their own discourses is both a new experience and a threatening one for many white males.... While it is true that others in the classroom may also be more comfortable with a dominant discourse, it is generally white males who are accorded the powerful subject position in that discourse to act on it aggressively. If the teacher is a woman, the attempt may be made to relocate her as the sexist object of this discourse, thereby negating her authority as a professor in academic discourse. Several examples illustrate how this occurs (p. 11).*

The quotation above has implication for all nations in which women generally occupy a secondary place in the society; in which women suffer from several societal sicknesses; they are tortured or even murdered. If people of the world could cause change in their languages in favour of women, these changes may result in much better living conditions all across the globe. Language is not only a medium in human thinking ability, it influences our mental makeup to such a great extent that even a slight change in it will in turn trigger changes in how our minds are function which will in turn impact the way women are treated in all cultures.

In a quite distant setting yet on a similar topic as Rakow's study, in Estonia Kuurme and Kasemaa (2015) investigated the perceived advantages of being a girl and being a boy with the participation of students from secondary schools. In line with various other international studies two of their findings draw our attention:

- Girls are more oriented towards the norms that are based on the dominant discourse of what is suitable for girls. Studying well is one of these norms.
- The breaking of norms is more acceptable for boys, and sometimes it is even something boys are expected to do.

Egne (2014) wondered why the number of girls in Ethiopia majoring in Science, Technology, Engineering and Mathematics (STEM) is far smaller than that of boys. The researcher found that since girls do not have inadequate preliminary knowledge and academic preparation, they are less interested in those majors, their poor self-concept and the persistent effects of socio-cultural gender stereotypes, the existence of science educational experiences that do not welcome women are also other factors leading to girls' underrepresentation in those majors in Ethiopia.

Women in English are discriminated against not only in terms of semantics but also in terms of syntax. Besides derogating and belittling vocabulary in English, the syntactical forms also reveal gender discrimination. Chen (2016) citing two concrete examples from newspapers in which two murderers are mentioned, argues that when a woman commits a murder she is also the subject of the headline but when a man commits a murder he is instantly moved from the subject position. Thereby, women's image is more likely to be damaged while men's is inclined to be protected revealing an imbalanced power between men and women

Not only language as used in academic writing or other daily writing such as newspapers journals, columns, etc, pictures are also means through which we communicate consciously or unconsciously gender stereotypes. Carried out in a Spanish context, Romera's study analyzes, from a multimodal perspective, posters hung on walls in secondary schools and a university over a period of several months. The researcher discovers, as most of us would expect, that although the linguistic messages used in these posters avoid any reference to gender, images continue to represent classical stereotypes in a subtle and an inexplicit way. Images depict daily life activities, unexceptional and apparently without gender ideology. However, they still associate gender with classical roles (Romera, 2015). In a newspaper article published by the Guardian on March 24, 2015 we were informed that the official dictionary of the Swedish language would introduce a gender-neutral pronoun in April, 2018 and "hen" would be added to "han" (he) and "hon" (she) as one of 13,000 new words in the latest edition of the Swedish Academy's SAOL ("Sweden adds gender-neutral pronoun to dictionary," 2015).

Unlike Romera's synchronic perspective, Balhorn (2004) carried out a diachronic study regarding the use of generic *they* in English. Balhorn argues that there is sound evidence showing the widespread use generic *they* preceding the years of 20<sup>th</sup> century which, he believes, is an indication that the common use of *they* resulted from internal developments in the language rather than from external and social ones as implied in several other works. For example, two recent researchers argue that in spoken English the use of *they* with singular, generic antecedent is more common than *he* in both formal and familiar contexts (Matossian 1997; Newman 1997; ctd. in Balhorn, 2004). Balhorn attributes the rise of *they* to the loss of grammatical gender and rise of natural gender which took place in Old English and early Middle English periods of the history of the

English language. Yet in order to avert criticisms from feminist circles, Balhorns also endorses the fact that socio-cultural factors involved in the rise of generic *they*, and that social realities affect the language as a whole, particularly the lexicon.

### Non-Sexism and Truth

Feminism in language or advocates of non-sexism in language tries to achieve an equal representation for both men and women in a language. Thus, linguistics plays a significant part of political activities aiming at improving women's conditions at work, at home, or in social life. The motivation for equal representation in language comes from the weaker version of Sapir – Whorf hypothesis which argues that language shapes and reflects social reality (Pauwels, 2003).

We believe that truth of a statement is its conformity with fact or reality. We also believe that our languages reflect the physical and mental phenomena objectively, that is, our symbols used in communication can truly convey to us the nature of concrete and abstract entities. The following assumptions about language, meaning, truth and understanding are generally considered by several Western objectivist philosophers and linguists (Lakoff & Johnson, 1980):

- Truth is a matter of fitting words to the world.
- A theory of meaning for natural language is based on a theory of truth, independent of the way people understand and use language.
- Meaning is objective and disembodied, independent of human understanding.
- Sentences are abstract objects with inherent structures.
- The meaning of a sentence can be obtained from the meanings of its parts and the structure of the sentence.
- Communication is a matter of a speaker's transmitting a message with a fixed meaning to a hearer.
- How a person understands a sentence, and what it means *to him*, is a function of the objective meaning of the sentence and what the person believes about the world and about the context in which the sentence is uttered.

Lakoff and Johnson (1980), however, suggest that in particular Western culture is under the heavy influence of myth of objectivism which underlies the most prevalent controversies in Western culture. They also argue that the meaning of a sentence is given in terms of a conceptual structure and most of the conceptual structure of a natural language is metaphorical in nature. The conceptual structure is grounded in physical and cultural experience as are conventional metaphors. Meaning, therefore, is never disembodied or objective, and is always grounded in the acquisition and use of a conceptual system. Moreover, truth is always given relative to a conceptual system and the metaphors that structure it. Truth is therefore not absolute or objective but is based on understanding. Thus, sentences do not have inherent, objectively given meanings, and communication cannot be merely the transmission of such meanings.

Wittgenstein also investigated the nature of thought, language and world. As we know thoughts are psychological entities and language is the way we communicate these entities using some perceptible signs either sensed by ears (the acoustic signals coming from another person's mouth) or written symbols on a page. Wittgenstein, however, abandoned one of his earlier arguments in his *Tractacus* where he wrote: "A proposition is the description of a state of things" and later he judged that a proposition

is the description of a state of mind. 'The meaning of language, taken not as a theoretical possibility of communication but as actually communicating information from one person to others, is not to be discovered by an objective analysis of the rules of semantics and syntax at work in a discourse, but by investigation of the explicit or implicit, conscious or unconscious intention of the speaker' (Tavard, 1975: p. 710). If our sentences reflect our state of mind, what could be said about a certain state of mind which avoids using referential forms which do not indicate gender: could such a person be the ideal language user or should we believe that the person exhibits some deficiencies in his thinking? Most importantly, when gender disappears in language use, we will be deprived of one of the essential criteria in determining the truth value of any proposition. When a proposition has two possible truth values, that is when the language user hears or reads a gender free referential form, the utterance will have more than possible interpretations which would result in more confusions.

In its worst condition, the idea or the utopian idea of genderless rhetoric will turn out to be a kind of self-fulfilling prophecy which claims that people react not only to the situations they are in, but also, and often primarily, to the way they perceive the situations and to the meaning they assign to their perceptions. Therefore, their behaviour is determined in part by their perception and the meaning they ascribe to the situations they are in, rather than by the situations themselves. As with the Merton's (1968) example then when rumours begin about the bankruptcy of a national bank which has some liquid assets and most of its assets are invested in various ventures such as consumer credits, mortgage, etc., the bank is doomed to go bankrupt; we will be living in a community where gender differences become obsolete.

If our natural languages represent truth subjectively, that is to say, even if we discuss an issue objectively we are conveying some truth in a distorted way, then what would happen if we insist on using a non-sexist language in our academic and daily discourse? Therefore, when we avoid vocabulary indicating sex, are we going to live in a world which has become more peaceful due to the abandoning sex discrimination, or are we going to live with some distorted reality which will cause in the end to diminish the natural differences between sexes?

For ages, thinkers have been occupied with the question of the relation between language and thought. Based on observations and discussions on the relationship between language and thought during childhood or adulthood, we can now argue that language development and thought processes have a symbiotic relationship. Thus, the way we express ourselves in written or oral forms, and the way we see how others express themselves in written and oral forms will certainly affect the way how we think, how we understand and grasp reality, which reminds us of the famous aphorism of Wittgenstein: "the limits of my language are the limits of my world". With the solution offered above we, in this paper, have tried to open new horizons and expand the limits of our world through seeing other possible ways of referring to people.

### Conclusion

Famous philosopher of linguistics, Wittgenstein argues that logical and mathematical truths are true no matter what may happen to be the case because 'Mathematical truth is not discovered, it is invented' (Rodych, 1997:196). When we remember that truth is the property of sentences, assertions, beliefs, thoughts, or propositions that agree with

the facts, we also remind ourselves that the business of a factual assertion is to make a definite claim about the state of the world, and so its truth or falsity depends on whether the world is as it says it is. For example, when we refer to an author named “Morgan” with the pronoun she, and we make a definite claim and if Morgan is a female our claim becomes true and if not our claim becomes false. As Stern (1995) draws our attention unlike factual assertion logical truths are constructed in such a way that they rule nothing out and so are compatible with whatever is the case. For instance, when referring to the author “Morgan” we use both male and female pronouns simultaneously as in “s/he” then there is no need to check the sex of the author for no conceivable gender type can falsify a logical truth. Just as the logical structure of a truth of logic guarantees its truth, so the logical structure of a contingent proposition, in our case it is referring to a single author using either female and male pronoun, ensures that it is either true or false, depending on whether or not the gender of the author is as it says it is. Although the above-mentioned solution by the researchers of this paper to the problem of referring to various numbers of people from both sexes does not seem to be a logical truth, we believe, it should turn out to be a very practical way of reference both in academic and non-academic discourses.

As a final remark, we should ask ourselves the question to endorse McConnell-Ginet’s (2006) argument who finds some conceptually problematic aspect in feminist discussions of language: feminists attribute potency to language and they also believe that linguistic forms themselves have real import for society and culture. However, we should always be reminded of the fact that just as society and culture do affect language, no doubt, it is also the other way round. This reciprocity has always been the case. Therefore, dealing with forms only in language is analogous to killing the mosquitoes without draining the swamp.

The most significant implication that can be drawn from this study is that it probably does concern all academic writers producing scientific work in the English language. With the recommendations made by the researchers, potential authors would be able to employ sustainable language i.e. pronouns, all through their work without having to vacillate between different forms of this grammatical unit due to the effect deriving from *imposition* of ‘pundits’ from academia. Therefore, we believe that with this work, we were able to introduce sustainability, a term long reserved for economics and politics mostly, into the field of language in academic writing.

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## Sustainability Education Using ICT-Supported Dialogue – Towards Transforming Adolescents’ Perceptions of Alcohol in the Punjab, India

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### Abstract

A potential health crisis looms large in the Punjab, India where alcohol consumption has risen dramatically. Adolescents are especially vulnerable to the toxic effects of alcohol. This empirical study presents a pedagogical intervention, Children as Agents of Social Change (CASC), which aimed to raise awareness about the effects of alcohol using an ICT-supported educational dialogue among adolescent students and alcohol-experts from multiple domains. Primary data consists of pre- and post-test questionnaires from the control and experimental groups (N=379) and an interview of the teacher-in-charge of one experimental school. Results indicate that the intervention significantly improved students’ scientific knowledge about alcohol; changed their attitudes towards media and celebrity promotion of alcohol; and enabled them to surmount the odds to spread information – acquired during the CASC intervention- to people outside the school, including adult drinkers. Learner-centric pedagogy combined with ICT clearly amplified transformative learning. CASC appears to be a promising approach in Education for Sustainable Development (ESD). It can be used for multiple sustainability issues.

*Keywords:* CASC, ICT-supported dialogue, transformative health education in developing countries, alcohol education, sustainability education.

### Introduction

Health is an important aspect of social sustainability. Non-Communicable Diseases (NCDs) or lifestyle diseases are the biggest threat to human health. Alcohol consumption, tobacco, unhealthy diet and lack of exercise are the four leading causes of NCDs (WHO, 2011). Alcohol consumption is strongly linked with cancer, cardiovascular disease, liver disease, pancreatitis and diabetes (Parry et al., 2012). In 2008, about two-thirds of global deaths were caused by NCDs. Developing countries bear nearly 80% of the global

NCD burden (WHO, 2011). NCDs cause 61% of deaths in India (CSE, 2017). Drinking among adolescents is especially problematic as it can negatively impact an adolescent's developing brain (Walsh & Bennet, 2005; Giedd, 2008). With regards to sustainability, education must aim to foster informed, empowered and involved young citizens (Ohlmeier, 2013).

Nearly 90% of global adolescents live in developing countries (Sawyer et al., 2012). Despite urgency, most developing countries struggle to provide even good-quality basic education. Most developing countries lack the required number of teachers and these teachers are often ill-prepared to teach (Tooley, 2009). Therefore, innovative responses are urgently required to adequately meet these serious educational challenges (Sterling, 2011; Iliško & Badjanova, 2014; Salite, 2009; Salite et al., 2016).

This study created an intervention based on already-to-use framework – the Children as Agents of Social Change (CASC) framework. This CASC framework provides guidelines to create pedagogical interventions that enable transformative learning (Roy et al., 2013, 2014). This study investigates the applicability of CASC in an educational intervention conducted among middle and high school students in the Punjab, India, to prevent a potential NCDs crisis caused by alcohol. Middle school in India includes classes 6 to 8 (ages 11–14 years); and students in classes 9 and 10 (ages 15–17 years) are high school students.

### **Problem Background**

In the Punjab, alcohol consumption rose by 60% during 2006–2011 (PTI, 2012). In recent years, drug use in the Punjab has also risen alarmingly (Ghosh, 2013; PTI, 2014; TNN, 2015). Sandhu's study (2006) explored the nature and pattern of addictions in the Punjab and found 73.5% of addicts were in 16–35 years of age. Alcohol users are more likely to use harder drugs (Botvin & Griffin, 2004). A state-sponsored study on substance-use estimated the presence of 2.2 million alcohol-dependents, 1.6 million tobacco-dependents, and 0.27 million drug-addicts in the Punjab (Khanna, 2018).

Changed drinking patterns indicate that Punjabis have started to perceive alcohol differently in recent years. The real crisis of alcohol does not begin when a person becomes addicted to alcohol, falls sick or dies of alcohol. The crisis of alcohol in the Punjab needs to be understood in terms of (Punjabi) people's willingness to presume thoughts that construct positive attitudes towards alcohol and alcohol consumption. Such thought-patterns lead people to perceive alcohol-consumption as normal and an acceptable part of life. Accepting these thought-patterns underlie the external symptoms of addiction, disease, disability and death caused by alcohol. Authentic educational interventions must tackle the foundationally misinformed thought-patterns.

India hosts the world's largest teenage population (115.3 million) and about 90% of urban teens consume mass-media (Jain et al., 2011). An ever-younger age of alcohol initiation is the main emerging trend throughout India (Prasad, 2009). Adolescents witnessing widespread alcohol consumption in one's community can lower the threshold for alcohol consumption (Bendtsen et al., 2013).

Along with factual information, ICT-based new media and mass-media often offload misinformation, using sophisticated and psychologically manipulative methods. Punjabi adolescents constantly experience pro-alcohol social reality and dazzling alcohol promotions through advertisements, songs and movies.

Using celebrities in advertising is a marketing strategy that aims to exploit their social status and their fame in promoting a product or a service (Jiménez-Zarco et al., 2016). India ranks highly in the global index of celebrity-influence (power-distance index) indicating that people are uncritically trusting celebrities (Hofstede, 2001). Therefore, pro-alcohol messages passed by celebrities significantly influence Indian consumers' behaviors (Roy et al., 2013). Social background matters: Sandhu's (2006) study also found that 70% of Punjabi addicts were financially marginalized; one possible explanation is that people from disadvantaged social strata are more likely to consume alcohol to numb their frustrations (WHO, 2003).

Share (2009) contends that modern media is a powerful tool of public pedagogy that organizes, shapes and disseminates information, ideas and values to push corporate produced youth culture; and that global media amplifies commercially-motivated information over unbiased and true information. ICTs insidiously affect the social beliefs; they indoctrinate masses for profits (Saffer & Dave, 2006). Strasburger (2011) listed several studies indicating advertisements' power to shape adolescents' minds with positive attitudes towards alcohol.

The latent triggers from social exposure and media constantly prompt youngsters to initiate. In the Punjab, poor quality of health education leaves youngsters vulnerable (Sandhu, 2015). The Khosla et al. (2008) empirical study in the Punjab demonstrated that half of college-going, school-pass-out adolescents had already used alcohol.

### **Transformative Learning, Dialogue and ICTs in Education**

Transformative learning (TL) is an effective approach to shift perspective and effect behavior change. TL challenges learner's existing assumptions; induces far-reaching shifts in a learner's perspective; produces significant impact or even paradigm shifts; changes the learner's personality; and affects learner's subsequent experiences (Clark, 1993). Through TL, the learners adopt more inclusive perspectives and world-views (Mezirow, 1991; Fedosejeva, et al., 2018).

Sterling (2011) has conceptualized the 'three orders of learning' to clarify pedagogical qualities of TL. In 'first order learning', education is provided within accepted boundaries and learner's basic values about the topic are left unexamined and unchanged. 'Second order learning' promotes critically reflective learning among students. It makes them aware of how they think about the issue. 'Third order learning' involves transformational, creative, epistemic learning and paradigm change. It encourages learners to see things differently, and hence changes their perceptions.

Dialogue is a transformative learning practice of collective communication that convenes learning through participatory, authentic and egalitarian social discourse. Dialogue represents 'the microcosm' of the society, i.e. it represents various opinions and assumptions (or thoughts) of different sub-cultures prevailing within a culture (Bohm, 1996; Cayer, 2005).

Dialogue is largely about sharing information and constructing shared vision (Knutson & Le Bigot, 2012; Pipere et al., 2015). ICT has revolutionized how humans share information and it has also attained a major role in education as well. Many low-cost, high-tech solutions like Hole-in-the-wall and One-Laptop-Per-Child have enthusiastically presented themselves as solutions to overcome the third-world educational deficit; however rigorous research strongly disagrees with their claims (Arora, 2010; Behar, 2010).

Apparently, education and learning are understood differently by technologists and educationalists. Seen from the pedagogical point of view, the main purpose of ICT is not to boost learning but to enable and intensify dialogue and communication.

### **CASC for Transformative Education**

Millions of Punjabi adolescents are living in at-risk circumstances. Dialogic education can help these youngsters understand the effects of alcohol better and choose healthy trajectories. Creating a real-life dialogue for school students raises challenges like gathering alcohol-related experts, getting them to visit the schools and their ability to use students' native language. Also, schools' daily routines and material resources set their own limitations.

The first writer (AR) has developed an ICT-supported pedagogical framework 'Children as agents of social change' (CASC). The pilot version of CASC was put in practice in Tanzania, where its aim was to increase the understanding of local students and residents about ecological and social defects that were caused by forest fires (Roy et al., 2014). In Tanzania, the CASC framework combined educational videos with problem-based learning (PBL). The principal idea was to promote sustainability by developing a learner-centric, culturally-sensitive, locally-contextualized and cost-effective learning environment. Features like adaptation of the content to the local circumstances, use of native experts, and pragmatism about non-availability of ICT infrastructure underlie CASC.

Despite these learner-centric features, CASC framework-based intervention in Tanzania handled education mechanically to disseminate knowledge. Accordingly, the CASC framework suffered four critical educational limitations:

1. Adolescents often have prior knowledge about recurring societal phenomenon from informal and non-formal sources. Correcting misinformation and misconceptions thus learned need deeper reasoning and accurate knowledge (Ambrose, 2010). CASC did not consider prior knowledge at all.
2. Critical reflection is enriched by viewpoints of multiple stakeholders and multi-disciplinary experts. However, CASC intervention highlighted the views of the forestry-experts only. The approach could lead to partial understanding of the problem.
3. CASC framework-based intervention used educational videos to provide working-level experts' knowledge to the school-students. However, students had no opportunity to question the experts. Such top-driven, hierarchical information flow is quite possibly indoctrinating. Indoctrination impedes deeper learning (Krishnamurti, 1953) and co-investigation of reality (Freire, 1970).
4. The CASC framework screened the educational video through a projector setup only once. Low device availability is not uncommon in developing countries. Even if required, students had no option to review the imparted knowledge.

Some foundational changes were made to overcome these shortcomings. The following respective steps could convene this shift:

1. Survey of popular thoughts/beliefs prevailing in the society, especially among its youth, could clarify the common instigators that students might encounter and embrace.

2. The students should have the ability to question the experts through inexpensive ICTs.
3. Multi-disciplinary experts and the views of various stakeholders could be integrated into the educational content.
4. Illustrated summary-booklets could serve as review-source.

Modified CASC incorporating these amendments was used to guide the intervention in Punjab. Figure 1 briefly depicts the information flow in the CASC based intervention:

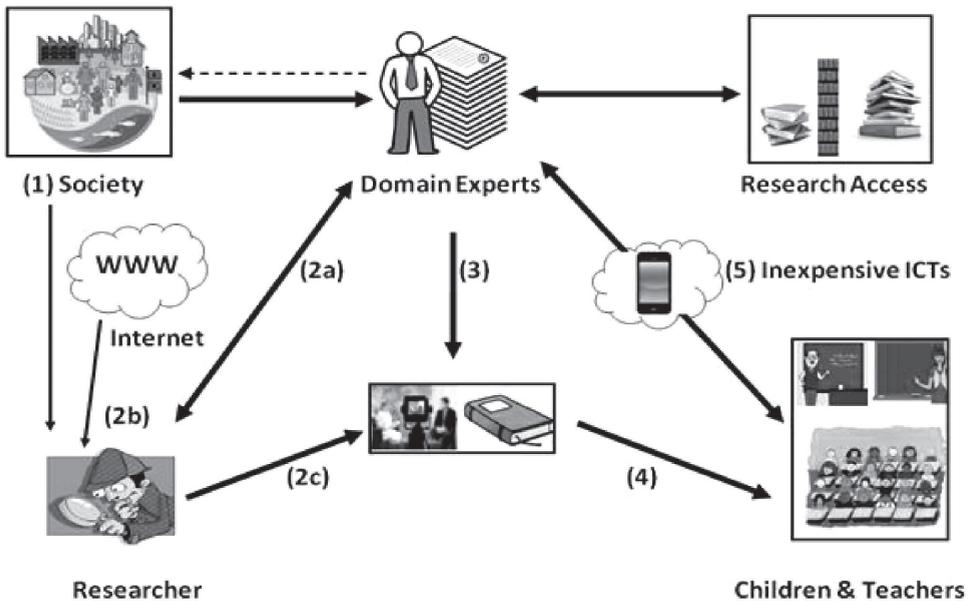


Figure 1. Information-flow in CASC framework:

- 1) Informal survey of thought-patterns that encouraged alcohol-use among drinkers;
  - 2a) Interviews with multi-disciplinary, working-level experts discussing popular notions about alcohol;
  - 2b) Accumulating resources from the Internet;
  - 2c) Creation of learner-centric video and illustrated summary booklets;
- 3) Experts validate the content;
- 4) Show video and provide booklets and
- 5) Inexpensive ICT-based communication between experts and schools.

### Implementing CASC Intervention in the Punjab

The guiding principle in modified CASC is to use dialogue to facilitate transformational learning. The localization of content helps youngsters find real life connections easily. Connecting the content with real life can ground the educational dialogue in day-to-day reality. In the Punjab intervention, popular beliefs or thought-patterns about alcohol and its usage were mapped through an informal survey among adult and adolescent Punjabis. These beliefs were analyzed and categorized in three categories:

- prevailing social norms and increasing acceptance of alcohol;
- media influences;
- and lack of scientific knowledge.

Video-recorded interviews were held with noted experts from multiple alcohol-related domains. These interviews clarified the foundational beliefs among Punjabis about alcohol. Based on the collected material, an educational video of 40 minutes was made. Wherever needed, the expert's voice was translated and dubbed into Punjabi by the volunteers – the local theater artists.

The openness of communication is a necessary part of any dialogic relationship. In the Punjabi case, students were offered an opportunity to ask questions to the experts and even challenge their expertise. This was made possible by inexpensive ICTs that were used to enable communication between students and the experts. Low device availability is not uncommon in developing countries. Because most students did not have access to the video content after the intervention, an illustrated summary-booklet was made to serve later as a review-source. The educational content (i.e. the video and the summary-booklet) re-created the microcosm of the Punjabi society about alcohol (see Table 1) by depicting the popular thought-patterns that pave the way for drinking initiation. The experts validated the final content.

Table 1

*Constructing the Microcosm of Punjabi Culture Regarding Alcohol*

Thoughts of/by/about	Represented by	Content Type (Source)
Peer influences	Edutainment video depicting role of peer influences and media in alcohol initiation	Video (from the director)
Alcohol drinkers	Posed as questions to the experts	Informal discussions with drinkers
Alcohol producers	Psychiatrist: market research by alcohol producers	Video (Interview)
Media and celebrities	Celebrities promoting alcohol through surrogate advertisements	Videos and images (Internet)
Local reality (learner's life-world)	Local liquor shops and billboards promoting alcohol placed at city's prime locations	Images (researcher clicked images)
Local cultural trends	Punjabi parties with alcohol	Party images (Internet)
Medical researchers	Psychiatrist (Professor)	Video (Interview)
Physiological consequences	Images and animation	Videos and images (Internet)
Neurological effects of alcohol	Brain scans and brain development phases	Images (Internet)
Addict's family	Girl with alcohol addicted father	Video (Interview)
An educationalist	Physician-turned-teacher's views about alcohol among youth and cultural trends of alcohol acceptance	Video (Interview)

*Sequel to Table 1 see on the next page.*

*Sequel to Table 1.*

News reports	Data about high alcohol consumption in Punjab and Patiala; quantity of alcohol consumed	An anonymous blogger's collection of alcohol-related news-reports (Internet)
Social costs	Drunk driving accidents from Punjab	Video and images (Internet)
Social consequences	Brief mention of Widow's town (Maqboolpura in Amritsar, Punjab); an area affected by high alcohol and drug related deaths	Video (Interview), video (from the social worker in Maqboolpura) and images (Internet)
Social workers	Two social workers from Widow's town explained social disfunctions caused in their area by alcohol and drugs	Video (Interview)
Sociology research	Sociologist (Professor) with research expertise in drug research in Punjab	Video (Interview)

The Internet was used as an easy-to-locate and ready-to-use repository where individuals and organizations had already amassed helpful resources about alcohol. Emails were sent to the original content-publishers requesting content re-use permissions, but only one content-publisher (who vindicated the effort) responded. Following legal advice, a 'Disclaimer' about non-commercial, educational use of the content was added in the materials and a list of sources were included in the video.

### Methodology

This study investigates, in a developing country context, the feasibility of the CASC framework in an ESD intervention aiming to transfer students' perceptions about alcohol. The aim of this study can be divided into three research questions:

Does CASC intervention enhance students' knowledge about alcohol and its usage?

Does CASC support critical evaluation of Media contents and advertisements?

Does CASC approach promote transformative learning in ESD?

As the main target of this study is to solve a difficult issue in society, i.e. alcohol abuse, by broadening adolescents' perceptions about alcohol and thereby possibly their forms of conduct, there seems to be close resemblance to educational action research (see Salite, 2008; El-Deghaidy, 2012). It is seen as an effective tool to foster reflection and visioning in education. Varieties of educational action research e.g. participatory action research, experimental action research and transformative action research- guided the approach of this intervention at different stages.

### Sample for the Research

All participating schools were from urban areas of Patiala district in the Punjab. School B volunteered to take part in the CASC intervention. The District's Education Office (DEO) strongly suggested this intervention for School A as students in this school came from financially marginalized backgrounds where alcohol consumption was high. The three control schools (C, D and E) did not want to participate beyond pre- and

post-tests. In total, five schools agreed to participate. All participating schools mentioned that they keep informing their students about alcohol and drugs in various ways along with teaching the related educational materials.

Average age of control group was 13.3 years and of intervention group 13.9 years. Table 2 presents sample details and ICT readiness of the schools. Informed consent forms were signed by parents of all participants.

Table 2  
*Sample Size and ICT Availability in Schools*

Group	School	ICT Infrastructure	Number(F + M)	Group-Total
Intervention	School A	None	33 (7 + 26)	167 (70 + 97)
	School B	None	134 (63 + 71)	
Control	School C	None	100 (45 + 55)	212 (93 + 119)
	School D	Available	70 (40 + 30)	
	School E	Available	42 (22 + 20)	
Total			379 (163 + 216)	379 (163 + 216)

### The Intervention Process

The researcher brought the required ICT equipment (projector, laptop, speakers and summary-booklet) as the experimental schools lacked them. During intervention, the experimental group watched the educational video: 'Is alcohol really harmful?' and video about problem-based learning (PBL) approach. After the video, the teachers created student groups; they asked students: "If alcohol is a problem in your society; then what are you, as a group, going to do to solve this problem?" In response, students were asked to decide on a group-project through group-dialogues. Each group received a summary-booklet. Students were encouraged to ask questions of the teachers and the experts before and during the carrying out of group activities. Questions unanswerable by the teachers or researcher were forwarded to an appropriate expert through ICTs. The expert's responses were publicly shared. Each group presented its final work to all the participants.

Pre-testing preceded the intervention. The researcher explained how to answer the questionnaire and the use of collected data in this research. School A asked the researcher to be the teacher and to conduct the intervention in two and half days. School B made its own teacher in-charge of the intervention and invested one-period a day for two weeks. The CASC intervention was implemented as described above. Post-Testing was conducted after the group-presentations. School B's Teacher in-charge was interviewed after the post-test.

Emails were sent to the school board to clarify ambiguities. The entire intervention was focused on the effects of alcohol. Throughout the intervention, students were never told to consume or not consume alcohol.

## Data Sources and Data Analysis

Pre- and post-testing used the same questionnaire that was in the Punjabi language. Students who skipped either of the tests were excluded from the analysis. The items of the questionnaire mapped students' responses on the following:

- (1) perceptions about alcohol usage in their local environment,
- (2) scientific knowledge about alcohol usage,
- (3) attitudes towards media and celebrities,
- (4) beliefs and attitudes about drinking, and
- (5) perceptions about children's role in a society.

The questionnaire included Likert-scale, multiple choice, small-answer and open-ended questions. Additional post-test questions were asked of the experimental group only.

Statistical tests were used to estimate the significance of any observed differences. The Welch t-test was applied when comparing the responses of intervention groups and control groups (Delacre et al., 2017). When the differences between all participant schools from A to E were examined, Welch's ANOVA was used as the statistical tests and Games-Howell as a post-hoc test (Field, 2013, 442–459). In the Welch's t-test and Welch's ANOVA, the homogeneity of variances is not assumed. When schools are compared in the text, for the sake of clarity a sub-index is added to the mean in order to help identification (e.g.  $M_A$  = the mean of school A).

When the differences between pre- and post-test responses in a single group were examined, the paired sample t-test was applied because it tolerates skewness and non-normality in the distribution (Delacre et al., 2017).

Students' responses to the open-ended questions as well as the interview of the teacher-in-charge in school B were analyzed using conventional content analysis (Hsieh & Shannon, 2005).

## Results

### Perceptions About Alcohol Usage

According to the pre-test, a majority of students both in the intervention group (97%) and control group (92%) were aware that drinking is a common occurrence in the Punjab. Students also knew that people used to drink alcohol in parties and at home (91% intervention, 84% control).

Most of students knew at least one daily drinker, although the relative proportion was significantly higher ( $p = .002$ ) within the intervention group (89.4%) than in the control group (64.6%). In the school examination, students from school A were more accustomed to see alcohol usage in their daily life ( $M_A = 1.5$ ) than others; at the other extreme, students of school D ( $M_D = 2$ ) and E ( $M_E = 2.7$ ) were least experienced in seeing alcohol usage and its results ( $F_{4, 137.8} = 11.96, p < .000$ ).

In the pre-test responses, most students were not willing to try alcohol (intervention 85.5%, control 87.1%). In the intervention, the group situation remained almost the same (post-test 86.2%), but in the control group the proportion of those who did not want to try alcohol reduced significantly (76.2%,  $p = .002$ ). In the school examination, there were also differences between the pre- and post-test responses (Table 3). However, changes in school C and E (control group) are the only ones which are statistically significant ( $p = .038$  and  $p = .033$ , respectively).

Table 3  
*Willingness to Try Alcohol, Group Means (Likert scale: 1 – Strongly Agree; 5 – Strongly Disagree)*

Statement	Test	School A	School B	School C	School D	School E
One should try alcohol sometime	Pre	3.71	4.66	4.32	4.19	4.50
	Post	4.16	4.53	4.05	4.00	4.22

### Scientific Knowledge

In the pre-test, only a few students knew that the human brain takes about 25–30 years to mature (intervention 4.3%; control 2.9%). In the post-test, 98.1% of the control group, students responded wrongly. Only 12.6% of the intervention group students did not know the correct answer (see Figure 2).

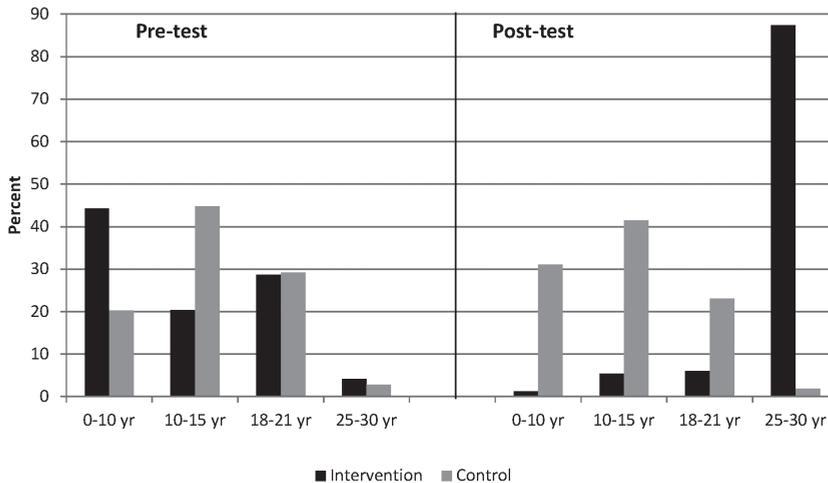


Figure 2. Comparison of students' perceptions of age of brain maturity

Initially, the vast majority of students (intervention group 66%, control group 80%) disagreed with a statement that alcohol improves activity of the sexual organs. In intervention schools A and B, the group mean shifted to a more negative direction in the post-test responses ( $M_A = 3.1 \rightarrow 3.4$ ,  $M_B = 4.1 \rightarrow 4.3$ ); however, the observed change was not statistically significant ( $p = .074$ ,  $p = .112$  respectively). On the contrary in the control group schools C, D and E attitudes changed significantly to a more positive direction ( $M_C = 4.2 \rightarrow 3.9$ ,  $p = .02$ ;  $M_D = 4.2 \rightarrow 3.4$ ,  $p = .001$ ;  $M_E = 4.5 \rightarrow 4.0$ ,  $p = .008$ ). Accordingly, in the control group some students started to believe that alcohol increases sexual activity.

### Media

The questionnaire also charted students' use of media. Students were given five examples of media from which they had to choose their favorite one. The most liked medium was TV (38%), then books (19%), the Internet (18%) newspapers (17%) and radio (8%). In all schools, TV was the most liked medium, although in school D, it shared its leading position with the Internet.

In the pre-test 89% of all students agreed that songs, movies and advertisements play a role in their lives. Celebrities have psychological potential to influence Indian youngsters. Figure 3 shows a simplified three-level version of an original five-level Likert-scale question about students' willingness to accept their favorite celebrities' advice:

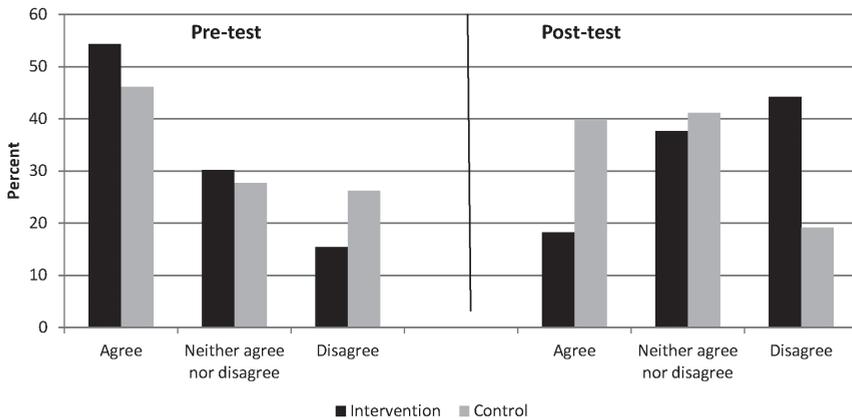


Figure 3. Comparison of student's willingness to accept advice from a favorite celebrity

Both the pre- and post-tests show significant difference between participating schools (pre-test  $F_{4,141.2} = 7.72$ ,  $p < .000$ , post-test  $F_{4,134.6} = 9.28$ ,  $p < .000$ ). A school examination reveals that before the intervention, students in school A were the most willing to accept their favorite celebrities' advice. However, in post-testing the students of both intervention schools were significantly ( $p < .000$ ) more suspicious of what celebrities say ( $M_A = 1.7 \rightarrow 3.5$ ,  $M_B = 2.6 \rightarrow 3.5$ ), while in control schools, situation remained almost the same ( $M_C = 2.6 \rightarrow 2.8$ ,  $M_D = 2.9 \rightarrow 2.6$ ,  $M_E = 2.5 \rightarrow 2.7$ ;  $p > .05$ ).

Table 4

Students' Perception about the Media (Likert scale: 1 – Strongly Agree; 5 – Strongly Disagree)

Statement	Group	Test	Group Mean	p-value
Media always tells the truth	Control	Pre-Test	3.17	.426
		Post-Test	3.22	
	Experimental	Pre-Test	3.02	.002
		Post-Test	3.40	
Media plays a role in increasing social problems	Control	Pre-Test	2.95	.002
		Post-Test	2.69	
	Experimental	Pre-Test	3.10	.000
		Post-Test	2.65	

In the post-test, students of the intervention group were significantly more suspicious about the media's credibility than in the pre-test. In the control group, the situation remained almost the same. In the pre-test 27% of intervention group and 31% of control group agreed that media may increase social problems. In the post-test the critical attitude increased significantly both in the intervention group (37%) and control group (38%).

### Children's Perceived Role in Society

The students were asked if children could play a role in eliminating social problems. In the pre-test, School A students were least positive about their ability to contribute to their society. However, in the post-test, they were significantly more positive ( $p=.009$ ) about their possibility to solve social problems. Strength of this agreement weakened in the control schools D and E in the post-test (Figure 4):

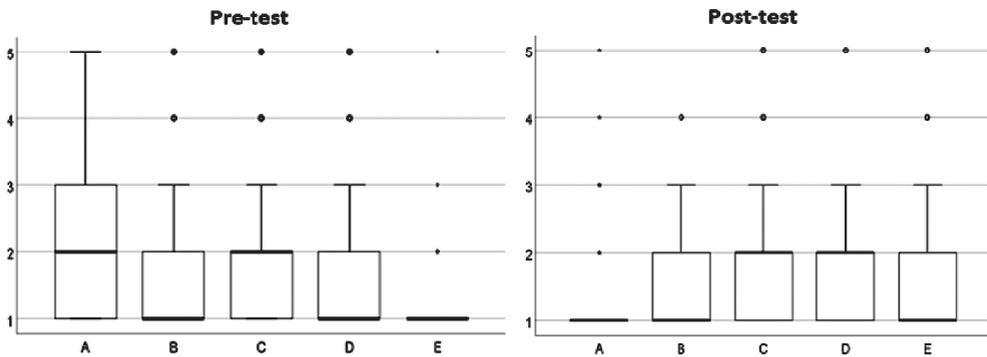


Figure 4. Students' perception about children's ability to eliminate their society's problems. (Likert scale: 1 – Strongly Agree; 5 – Strongly Disagree)

The effects of intervention were observable not merely in quantitative data. Also, in terms of the students' behavior changes, a large number of self-motivated actions emerged from the intervention.

Most groups initially chose activities involving social interactions e.g. organizing rallies with banners, posters and models to make people of the city, neighborhood and at homes aware of risks of alcohol. One group wanted to write a letter to the Chief Minister of their State to ban alcohol. However, the schools did not permit these activities. Instead, students were told to opt for in-campus activities like making charts, writing poetry and giving speeches about the effects of alcohol.

Nevertheless, some students initiated self-motivated dialogues about alcohol with drinking adults (see Table 5).

Table 5  
*Students' Self-Motivated Dialogues*

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I talked to someone outside the school about this project, video or book.	53.7%	22.2%	8.0%	13.0%	3.1%
I talked about this project, video or book with someone who drinks.	36.2%	11.0%	19.0%	22.7%	11.0%

Inspired by these initiatives, some adults had promised to quit drinking. One School A student mentioned: "I showed the book to my uncle who drank every day and he decided to quit drinking altogether. Now no one drinks in my family."

### Additional Responses

Additional questions about the CASC approach were asked from the intervention group in the post-test. Table 6 summarizes these responses:

Table 6  
*Additional Questions Asked of the Intervention Group*

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I learned several new things about alcohol.	77.3%	17.8%	3.7%	1.2%	–
I think that I understand alcohol better now.	76.2%	18.9%	1.8%	1.2%	1.8%
I liked this idea of learning about a social issue through video, book & PBL.	72.8%	24.1%	2.5%	0.6%	–
Endorsement of products by celebrities is good.	11.0%	4.9%	27.6%	14.1%	42.3%

Students' were encouraged to ask if they did not understand something or if they wanted to have more information. During one question session, a School B student argued that his father drinks everyday for relaxation and that such drinking is harmless and recreational only. It was discussed that although alcohol temporarily relaxes the brain, it is also highly likely to cause multiple diseases. In response, the student still insisted that drinking will not harm his father.

One question raised by the students could not be answered either by the teachers or the researcher. This question was emailed to the relevant expert, the psychiatrist, who responded overnight. Within 24 hours, the response was publicly shared with the students who expressed complete satisfaction with the answer. Further to this incident, emails were sent to the Punjab State Educational Board to clarify the ambiguous textbook content about alcohol. These emails received no response at all.

Many students mentioned that the information about the health effects of alcohol on the body and the brain were the most important for them. Students deeply appreciated the psychiatrist's contribution to provide critical and well-founded content. Images of the places they knew already, advertisements by celebrities, brain images and animations were also well-received by a majority of the intervention students.

A student in School B wrote: "I liked it that the book had many images. It helped me as I wanted to show it to a person who is illiterate and drinks. I showed him the pictures and warned him." During project-presentations, unlike School B, only a few groups in School A explained their projects. Others were too shy to engage in public speaking.

### Teacher's Perceptions

In her interview, the School B teacher mentioned that alcohol education in their school had been morality-based and lacked scientific-basis. She mentioned that teachers will understand the topic much better after this intervention. "We have tried to tell children about alcohol in other ways several times, but it was much more effective this time."

The interviewed teacher liked the documentary, which she saw as containing much information presented at a dynamic pace. Still, the book was also needed, because it helped students and the teacher to deepen the understanding of the topic. “Especially important were the images in the book, which helped children to find more clarity on the topic.”

The teacher also mentioned a post-intervention change in students’ attitudes. Earlier they had thought that they were grown-ups and they used to act that way. Now, they knew that their brains are still under development. The interviewed teacher confirmed that many students had discussed this information about alcohol with people at home or with neighbors who drink. Consequently, the influence of intervention did not stay inside the school walls. The teacher assessed the CASC approach as very useful: “If you want to talk about any other social issue as well, children will like it.”

### Discussion

According to the pre-test, students of participant schools had been exposed to alcohol in multiple ways. The Punjab’s socio-cultural reality presumes alcohol consumption as normal and acceptable; therefore, these adolescents are vulnerable to early initiation (e.g. Bendtsen et al., 2013; Dhaliwal, 2017). CASC unearthed some false beliefs about alcohol among Punjabis that students can easily learn outside school. As an example, most students assumed that the human brain matures within the first fifteen years. Obviously, they did not realize that alcohol is especially harmful for adolescent’s developing brain (see Walsh & Bennet, 2005; Giedd, 2008). The intervention presented these misconceptions in the light of scientific and social research.

During the pre-test, students in all schools asked for explanations of the terms ‘media’ and ‘advertisement’. Despite regularly using media, students completely lacked a vocabulary for their daily experiences, indicating naive understanding about any prime information source. The willingness to accept a favorite celebrity’s advice indicates students’ vulnerability to market exploitations and an uncritical openness to adopt new ideas and behaviors (e.g. Share, 2009; Hofstede, 2001). The students from intervention schools learned about the role of the celebrities and the dualistic nature of media. They expressed displeasure over commercially-motivated celebrity endorsements, which clearly indicate critical thinking and second order learning (see Sterling, 2011).

For students, the opportunity to dialogue with experts was an opportunity to think, reflect, clarify and critically examine one’s own assumptions and perspectives (see Bohm, 1996). The opportunity of the intervention probably intensified students’ awareness of their personal and social assumptions, and their scientific knowledge about alcohol. Control group students also showed potential to reflect and think critically. However, changes in the control group were more scattered, individualistic and partial. The intervention group showed more coherent and transformative group-shifts.

This grounded approach to content development reflected the microcosm of Punjabi beliefs about alcohol. This connected the students’ worlds inside and outside school which helped them in having convincing conversations outside school. Students could verbalize their disagreements and contrary opinions indicating that the intervention was a dialogic co-investigation and was not using indoctrinating techniques (Cayer, 2005; Jarvis, 2008). Despite listening to the opposing views, most intervention students preferred the coherent scientific view-point. Dialogue about alcohol at school produced

dialogues at home and in neighborhoods. Personal behavior changes, adoption of relevant information and students' self-driven attempts to create change indicate third-order transformative learning (Sterling, 2011).

It is probable that School A students were not particularly eager to argue for alcohol because they had witnessed alcohol-related deaths more frequently than School B students. There were no previous studies conducted in the region highlighting the connection between financial marginalization and school students' perceptions of alcohol. The pre-test responses showed that school A students were more likely to initiate early drinking (see Bendtsen et al., 2013). They also lacked confidence in children's ability to change their society. This finding agrees with previous research: the poorer populations feel powerless and are, therefore, more vulnerable to addictions (Berkman & Kawachi, 2000; Sandhu, 2006). In the post-intervention responses, this otherwise 'natural' trajectory changed: School A students' confidence-level soared significantly and coherently.

Interestingly, post-test results showed a decline in self-confidence among the control group. Similarly, in the post-test, more control group students believed that alcohol improves activity of the sexual organs than in the pre-test. Also, the number of students who were willing to try alcohol increased in the control group. These unexpected and unwanted results might be explained with the fact that some statements in the pre-test had aroused students' curiosity about alcohol among the students of the control group. Because of the lack of proper information, they had to ponder the topic by themselves or with their class-mates. The significant shift towards more positive attitudes towards alcohol in the control group implies that there are risks associated with inadequate and hasty opening of the topic.

## Conclusions

There were limitations in this study. Because the participants were selected on a voluntary basis (convenience sample), the results cannot be generalized as it is done in a traditional experimental research. Also, details of conversations outside the school should have been asked of the control group students.

Multiple crises such as the environmental crisis, the financial crisis and some lifestyle disease crises are man-made offshoots springing from serious gaps in human thinking and knowledge. Educational solutions supporting sustainable development are urgently needed in all developing countries. Providing transformative sustainability education is a great opportunity as well as a hugely under-recognized challenge. Despite its urgency, this challenge has not been taken up with adequate seriousness.

Education can powerfully equip adolescents to make healthy choices; and it can save millions of naive adolescents from adopting misguided perceptions and indulging in voluntary self-harm. The CASC intervention aimed to scrutinize misinformation and pro-alcohol social beliefs in light of actual scientific information and contextual social knowledge. The intervention presented a reflective stance towards media contents, increased students' understanding and encouraged them to act like participating members of society. Both the results of the questionnaire and the feedback, from students and the teacher, confirms that the CASC approach is suitable not only for alcohol education but also other topics of ESD.

The CASC framework demonstrates that appropriate use of ICTs can support transformative education, and the intervention could be easily up-scaled for the urban

areas of the Punjab. However, perceptions of alcohol among inhabitants of rural areas may differ and may need modifications. One-size does not fit all.

The texture of a society lies in its approaches to meaning-making. Dialogue provides new references and meanings to understand old phenomena differently. Emergence of a more valid and rigorous context for conversations re-contextualizes the social meaning-making phenomena; thereby, changing the texture of society. Through the intervention, children learned new approaches of meaning-making e.g. they became more critical towards product endorsements by celebrities; and their personal behaviors changed noticeably. These changes are likely to outlast the intervention. School-level dialogues open doorways to social change.

A further study to compare print-based and video-based-media in a similar kind of intervention would be worth closer examination. Also, the use of ICT-supported CASC intervention for in-service teacher training is also worth exploring.

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# Sustaining School Based Religious Education Leadership

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## Abstract

The number of people applying for school based religious education leadership positions is scarce in most regions throughout Australia as well as other geographical regions. Drawing on the insights from key stakeholders associated with religious education leadership in schools this qualitative study aimed to identify factors which militated against sustaining school based religious education leadership. This paper reports on the findings emanating from the study and proceeds to outline practical solutions that may contribute to attracting and sustaining future generations of religious education leaders. The key factors impacting on the sustainability of religious education leaders include feelings of disconnection, excessive demands associated with the role and a lack of structural support. Practical recommendations are outlined to contribute to sustaining school based religious education leadership. The recommendations include a review of teacher appraisal processes, equity in terms of industrial conditions and the inclusion of middle leadership positions that support the leader.

*Keywords:* religious education, leadership, sustainability, disconnection, connection.

## Introduction

Government schools throughout Australia are responsible for the enrolment of 65.6 per cent of the student population while the remaining 34.4 per cent are educated in various private schooling systems. Just over 99 per cent of the private schools are religiously affiliated and approximately one fifth of the schools in Australia are Catholic schools (National Catholic Education Commission, 2016). Catholic Education Melbourne (CEM) is the third largest diocese in the world and is responsible for teaching a quarter of Melbourne's student population across 330 schools (CEM, 2017). A distinctive feature of Catholic education in Melbourne is the belief that "each person is created in the image of God and called into communion with God (CEM, 2017). Enhancing this social sustainable institutional enterprise (Miedema & Bertram-Troost, 2015) is integral to the educational leadership responsibilities of all Catholic primary and secondary school principals who are required to transmit the religious dimension of the school through all aspects of school life. This includes the curriculum, staff and student formation, community engagement, as well as communal worship. Since the Second Vatican

Council (1962–1965) principals have appointed Religious Education Leaders in their schools with delegated responsibilities to advance the religious dimension of the school (Crotty, 1998). However, since the establishment of this leadership position it has been very difficult for many leaders to sustain this position for the full term of their appointment. The average turnover rate of Religious Education Leaders in some Australian dioceses is less than two years with many leaders resigning from the position before reaching the halfway mark of the term of their employment (Blahut & Bezzina, 1998). Drawing on the insights gleaned from a recent qualitative research investigation about perceptions of Religious Education Leaders, this paper explores some of the factors that contribute to low retention rates and then proceeds to discuss possibilities for sustaining leaders to reach the full term of their appointment. However, prior to exploring retention rates and discussing ways to sustain religious education leaders an overview of the research design which guided this study is presented.

### **Research Background and Design**

There are twenty-eight Catholic dioceses throughout Australia and each diocese is headed by a Bishop. The Bishop of a diocese is responsible for all things Catholic that are undertaken in the name of the Church. In particular, in the areas of faith and morals. Most dioceses have a centralised Catholic education agency headed by a Director to oversee Catholic education and the agency is accountable to the Bishop. These centralised bodies are commonly referred to as Catholic Education Offices and while they aim to ensure that all Catholic schools fulfil their accountability to the Church they must also comply with the legal requirements of government education authorities. The aim of the research was to understand the role and needs of the Religious Education Leader from the perspectives of key stakeholders such as members of the Clergy, members of the Catholic Education Office Executive, diocesan based Religious Education Officers, School Principals and Deputy Principals, Religious Education Leaders and those aspiring to leadership in religious education.

Drawing on the perspectives of the key stakeholders the research approach aimed to identify ways to enhance and sustain effective Religious Education Leadership that would foster and promote the Catholic identity of the school via a purposeful religious education curriculum. The research depended on the participants' willingness to participate in an in depth semi-structured interview where they were able to share their insights based on their experiences. The research was founded upon the epistemological foundation of constructionism which holds that reality is constructed through human interaction in which meanings are shared in dialogue and new knowledge is developed (M. Crotty, 1998). A theoretical perspective that complements constructionism is interpretivism and given that the study sought to capture the realities and meanings of individuals closely associated with the role of the religious education leader in Catholic schools, symbolic interactionism was an appropriate form of interpretivism underpinning this investigation (Gouldner, 1970). Symbolic interactionism is based on the premise that the self is comprised of two key components, the "I" and the "Me". Bowers, (1989) emphasised that "the Me component is the reflector" (pp. 36–37). According to the theory of symbolic interactionism each individual is comprised of multiple selves or multiple Me's and therefore "who I am depends on which Me is experienced as the most salient at the time" (Bowers, 1989, p. 37). In-depth semi-structured interviews

were used to gain access to the insights that cannot be read or observed by the researcher (Minichiello, Aroni, Timewell & Alexander, 1995). The adoption of a semi-structured interview method aimed to encourage the most salient Me in each of the participants to be their distinct role within Catholic education.

A written invitation was sent to key stakeholders associated with and including religious education leaders in Catholic schools. There were thirty-seven affirmative respondents and all consenting participants were sent an overview of the areas that would be covered in their interview. The areas included position title, selection criteria, appointment processes, and areas of responsibility, as well as ongoing formation and appraisal. The participants' insights revealed implications for the transmission of the religious dimension within the school through sustained leadership.

The use of semi-structured interviews was the gateway for constructing knowledge of how the participants understood the role (Kvale, 1996). The interviews were audio recorded and transcribed. The transcripts were used to verify that what the researcher heard was consistent with what the participant had stated thus enabling a clear distinction between the researcher's and the participants' perceptions (Clandinin & Connelly, 1994). Drawing on approaches to classic grounded theory, a process of constant comparison was adopted (Strauss & Glaser, 1967). After each interview, transcripts were produced and analysed using the constant comparison process to identify emerging themes which were progressively shared with each new participant. This enabled ongoing opportunities for participants to comment upon, critique and clarify data and thus contribute to the consolidation of emergent themes (Strauss & Glaser, 1967). The process of constant comparison provides an inbuilt mechanism for data to be cross-checked and verified (Dick, 2007). The findings emanating from the interview texts identified four broad areas that worked against sustaining religious education leaders completing the full term of their appointment.

## Findings

Generally, appointments to the position of Religious Education Leader are for three years however some scholars have calculated the average appointment turnover rate to be less than eighteen months (Blahut & Bezzina, 1998; Fleming, 2004). The insights gleaned from the perspective of the participants involved in this study suggest that the following factors compromise the potential to sustain religious education leaders in seeing out the full term of their appointment: a sense of disconnection, lack of qualifications, demands of the role, and lack of support.

### Disconnection

Religious Education Leaders in school are qualified teachers who are registered members of the professional body of teachers in their respective geographical region. Most religious education leaders are qualified to teach in other discipline areas. They are first and foremost experienced and qualified teachers and many have been working alongside teacher colleagues for many years. However, several participants noted a sense of exclusion towards religious education leaders from their colleagues once they moved into this leadership position. The following comment reflects the sentiment shared by most participants. "This role [Religious Education Leadership] can be a lonely experience.

Staff members run away because they feel inadequate when it comes to their own religion” (Participant X). Staff avoidance of the Religious Education Leader in a school is not surprising within the context of Australia which was founded as a secular nation. People are generally ignorant about religion and not comfortable talking about it and are likely to stray away from those who are likely to make demands on them to support the religious dimension of the school (Hudson, 2016).

Further to feeling disconnected from colleagues, Religious Education Leaders who are members of the school executive team also felt disconnected from other members of the school executive. The participants felt that other executive team members did not always see the religious education leader as a leading educator with expertise in the broader educational context. The following comment by a participant captures the perception expressed by the participants involved in this study.

*It is as if they [other executive team members] see the role as a defacto leadership position on the school executive. They seem to forget that Religious Education Leaders are qualified and experienced educators. Often other leadership team members do not understand the religious significance of the school or the intricate demands of the role. (Participant J)*

This perceived lack of understanding can be linked to the biases of many principals pertaining to the employment of religious education leaders. A major study about perceptions of the role of the religious education leader undertaken by Fleming (2004) revealed that in general, principals’ appointments to this position were biased towards those who could lead religious services such as public worship and reflection days. These appointment choices were made despite the position of religious education leader being advertised as a senior leadership position requiring expertise in leading in all aspects of school life including; curriculum, pastoral care, mission, strategic development. The religious education leader role is situated within the dichotomy of ecclesial and educational leadership responsibilities (Dowling, 2012). The ecclesial responsibilities are often prioritised over the educational leadership responsibilities because other leaders do not always understand the intricacies of the ecclesial aspects in the context of education (Crotty, 2005; Fleming, 2004). Circumstances such as these contribute to the way in which religious education leaders are perceived by other members of the school executive.

## Qualifications

Other factors that compromise the sustainment of Religious Education Leaders originate at a systems level, a result of diocesan policy directives (Buchanan, 2013). One example from an Australian diocese involves an industrial disparity between the determinations of salary levels for deputy principal roles. Generally salary levels for this role were determined by the number of deputy principal roles within a school and also the size of the student population. However, the experience of one participant involved in this study highlights a requirement that could be viewed as devaluing the position of a deputy principal who takes on the role of religious education leader. This participant stated

*I was Deputy Principal Curriculum for three years and then I applied to be Deputy Principal Religious Education in the same school. When I received*

*my first pay check in the new role I discovered that I was paid less. When I questioned this, my principal said that people in this role are paid less if they do not have a post graduate qualification such as a Master Degree in Religious Education. I felt devalued as no other deputy principal position tags a qualification to the income level. (Participant L)*

How one perceives their value within an organisation can impact on the extent to which they feel connected or disconnected from the school community. The leadership policy from the diocese in which Participant L was employed tagged the salary level for Deputy Principal Religious Education to successful completion of a postgraduate qualification. However, incumbents to the roles of Deputy Principal Curriculum or Deputy Principal Student Wellbeing could hold these positions and be paid a higher salary level without the requirement of having a postgraduate qualification.

It is commonly acknowledged that the demands of senior leadership positions within education are onerous and time consuming (Buchanan & Chapman, 2014). Therefore, tagging a qualification to a particular senior leadership pathway as well as a salary penalty for those without a postgraduate qualification, would steer many people away from aspiring to take on a religious education leadership position. The intention of diocesan leadership policies similar to the example referred to in the paper, are to profile the importance of the religious education leader role in relation to enhancing the religious dimension of the school. Ironically, the implications of such policy decisions are counter-productive to sustaining school based religious education leadership. Practical factors that deter aspiring schools leaders from the religious education leadership pathway have been identified in Buchanan (2014) and include; the financial burden associated with studying for a higher degree qualification and the stress associated with trying to find the time to study within competing professional and personal demands on time.

## Role Demands

Over the past two decades the excessive demands associated with the role of the religious education leader have been the focus of scholarly research. Liddy (1998) found that the role was too big for one person to handle and Crotty (2005) indicated that the bi-dimensional nature of the role forged a set of unprecedented challenges that extended beyond the traditional expectations of professional educators, to include ecclesial responsibilities. Fulfilling the ecclesial expectations of the role often meant that the educational demands were compromised (Dowling, 2012; Healy 2011). The participants involved in this study perceived that juggling the following demands of the role can cause more stress than satisfaction. As members of school executive teams, several participants stated that the demands of executive meetings and duties took up too much of their limited time that, according to their position description was allocated to leading religious education in the school.

*I am allocated ten periods a cycle as a religious education leader and I lose nearly half of this allocation in attending executive team meetings. Then there are actions that flow from the executive meetings which take up even more time. In reality the time I have for religious education leadership is minimal because it keeps getting eaten away by the executive demands. (Participant C)*

The participants involved in this study revealed that the time allocated to religious education leadership responsibilities should be devoted to advancing social sustainability of the whole person with the Catholic tradition (Miedema & Bertram-Troost, 2015). The focus of the responsibilities of Religious Education Leaders should be oriented towards sustaining the ministerial dimension of a school's life including leading the sacramental programmes, as well as the liturgical and prayer life of the school. Another area of responsibility included organising community outreach and / or social justice initiatives for students both within and beyond the classroom. They were also responsible for facilitating ongoing religious formation opportunities such as retreats and spirituality days for students and staff members. The participants involved in this study also identified the responsibility of leading and engaging staff members in professional learning experiences as time consuming and the following comment is illustrative of this point.

*I am dealing with many teachers of religious education who are not qualified and lack confidence in teaching religious education. With most of them, their heart is in the right place but they need a lot of support and I am running far more professional learning opportunities to help them engage with the religious education curriculum. In addition, I am also expected to run professional learning sessions for all teachers on aspects of the religious tradition so that they can contribute to enhancing the Catholic identity of the school. (Participant J)*

The curriculum was a major area requiring religious education leadership. In this space it was generally perceived that the religious education leader had responsibility for the whole school religious education curriculum as well as ensuring that the entire school curriculum reflected the ethos of the religious tradition. One participant summed up the demands on the religious education leader in the following manner.

*I have been the religious education leader for three years and when I first embarked on the role I became very stressed about all that needs to be done. When I think of how much I am responsible for it is overwhelming and I have come to accept that it will not get better with time. I have realised that I cannot do it all and while I am not happy with that, it is the only way I can survive. If I tried to do it all I would find it impossible and I would have to resign. (Participant M)*

It is not surprising that the multi-faceted and challenging demands associated with the position of religious education leader as perceived by the participants involved in this study, make it difficult to attract and sustain people to the role of religious education leader. According to Miedema (2017) schools quite often miss the point and what they think will contribute to continuous and sustainable outcomes such as those oriented towards the development of the whole person, will in fact be counterproductive due to other role demands such as those placed on the religious education leader.

## Support

When the principal of the school and the religious education leader's vision for religious education are aligned, the religious education leader feels supported in their role (Crotty, 2005). Support is sometimes understood as simply being asked about how initiatives are being managed. For example, a study on how religious education leaders

manage curriculum change revealed that these leaders felt supported when executive team members asked them how they were progressing, even though the team members did not offer practical help (Buchanan, 2010). The participants involved in this study still felt supported by the principal of their school. Their perception of support was in terms of the interest the principal showed towards the religious education leaders' fulfilment of their leadership responsibilities. Many participants perceived the support from the principal was shown through mentoring and encouragement in undertaking leadership initiatives.

*The principal is someone I turn to for advice. She understands the complexities involved in leading religious education and has helped me to navigate through some complex issues. The principal offers me the inspiration to try new initiatives and to make improvements wherever possible. This kind of support is energising.* (Participant T)

However, in relation to the practical day to day leadership of the religious education dimension of the school, several participants perceived a lack of support and a feeling of being overwhelmed. They felt that the structures within the school were not always effective. A major concern expressed by the participants was the lack of middle leaders with direct responsibility for overseeing aspects of the religious dimension of the school.

*When I was the curriculum leader in my school I could rely on the discipline leaders who directly reported to me to manage actions agreed upon by the curriculum committee or the school executive. However, when I took on the religious education leader role it soon became apparent that I was alone and dealing with every aspect on my own from preparing liturgies, organizing social justice initiatives, leading the curriculum, staff development, the list goes on ... I am not sure how long I can keep doing this.* (Participant L)

Religious education leaders seldom, if ever, have a team of colleagues who directly report to them and / or lead the implementation of certain aspects of the curriculum under their direction. Several participants felt that they were in a leadership position without a team of colleagues to distribute leadership responsibilities to. They felt that the religious education leader had to do everything and apart from feeling alone as a result of this, they were also concerned about the potential risk of suffering from work related burn out.

The perceptions of the participants involved in this study indicate some factors that militate against sustaining school based religious education leadership. These factors include; a sense of disconnection with colleagues in the school executive and also with staff members in general. Also the industrial implications associated with tagging the prerequisite of a postgraduate qualification to the pay structure and position description of the religious education leader, as well as the demands of the role and lack of practical support. The following section makes recommendations intended to enhance the sustainability of Religious Education Leaders to the extent that they see out the term of their leadership appointment.

### **Recommendations for Sustaining Religious Education Leadership**

Sustaining school based religious education leaders in Catholic schools to the full term of their leadership appointment is vital to ensuring continuity in their ability to help others present religious material sensitively, fairly and accurately (Jackson, 2016). The continuity that flows from sustained religious education leadership can contribute significantly to enabling the Christian message to be shared with the next generation who must navigate their way through the interplay between religious and secular values as well as critically reflect on ethical issues (Franzenburg, 2017; Kvamme, 2017). In the light of the perceptions gleaned from the participants involved in this study three recommendations are outlined.

#### **Overcoming a Sense of Disconnectedness**

The participants involved in this study perceive that religious education leaders experienced a sense of disconnection because some members of the executive did not understand their role or recognise their expertise as educational leaders. Furthermore, they perceived that some staff members avoided religious education leaders because they struggled with their own religious attitudes and were not comfortable with any public expression in this regard (Hudson, 2016). These concerns are problematic in the context of Catholic education because the Congregation for Catholic Education (1990) has held the position that the teacher is the key factor which determines whether or not a Catholic school will achieve its educational goals. Other key factors include the faith leadership offered by school leaders and their ability to impact on teachers' understanding of their role within a Catholic school community (Buchanan, 2011; Coll, 2009).

Teachers who accept positions in Catholic schools need to understand that their primary role is to aid the school in achieving its educational goals (Congregation for Catholic Education, 1990). All teachers and school leaders must take responsibility for enhancing the religious dimension of the school and engagement, rather than disengagement with the religious education leader, may assist them in fulfilling this obligation. The religious education leader needs to take on a strategic role in helping teachers and school leaders to identify areas where they can actively participate in aiding the Catholic school to achieve its religious aims. In formalising this important responsibility, the annual performance review process that teachers and leaders undergo should require them to also identify and reflect upon ways in which they have contributed to enhancing the religious dimension of the school. Educators who recognise their responsibility to actively participate in aiding the Catholic school to achieve its aims will gain a deeper insight into the ecclesial and educational goals of the school and the role that the religious education leader plays in this. When teachers and leaders acknowledge their own role in this space and the support that religious education leaders can offer in helping them to fulfil their responsibility, then the value of collaborative interdependent connections between staff members and religious education leaders offers a sense of purpose to all parties. A sense of purpose militates against feelings of disconnection and may contribute towards sustaining religious education leaders and enabling them to reach the full term of their employment.

## **Qualifications**

In many dioceses, religious education leadership positions are senior positions in schools, equivalent to other senior positions such as curriculum leader and wellbeing leader. This research has shown that some participants have experienced inequities in salary levels with those in religious education leadership positions receiving a lower salary than those in other senior leadership positions of equal standing. The reason for this inequity is because those undertaking a religious education leadership role are required to have a postgraduate qualification, in addition to their initial teacher training qualification, in order to receive a salary equal to other leadership positions at the level. The salary for other leadership positions of equal standing is not tied to the incumbent holding a postgraduate qualification. Those aspiring to senior leadership may steer away from the religious education leadership pathway because of the lower salary and/or because the additional demands associated with undertaking a postgraduate qualification are too challenging for many educators to undertake. These obstacles reduce the pool of educators aspiring for religious education leadership positions and threaten the sustainability of this role in all Catholic schools. It is recommended that dioceses re-examine their religious education leadership appointment policy and ensure that salary levels for this position are not tied to holding a postgraduate qualification. This will ensure that salary inequity is not a blocker to sustaining school based religious education leadership. Alternatively, it is recommended that dioceses review all their senior leadership appointment policies and if they conclude that a postgraduate qualification is required, then it should be required in all senior leadership appointments. For example, a Curriculum Leader should hold a Master Degree in Curriculum Studies, a Wellbeing Leader should hold a Master Degree in Pastoral Care and a Religious Education Leader should hold a Master Degree in Religious Education. Either way the recommendation, in summary, is that the salary level and postgraduate requirements for senior leadership positions should be equal. This kind of equity will contribute to sustaining school based religious education leadership.

## **Role Demands and Support**

The participants involved in this study perceived that the demands of the role are too great for one person to handle and concerns about the excessive demands of the role have been raised for decades (Buchanan, 2014; Crotty, 2005; Dowling, 2012; Fleming, 2004; Healy, 2011; Liddy, 1998). A key factor contributing to the excessive demands associated with the role is a result of the lack of practical support for the religious education leader to carry out the role (Buchanan, 2006). Traditionally, this senior leadership position evolved in a way in which religious education leaders had no personnel directly reporting to them or middle leaders to whom they could delegate responsibility. This meant that religious education leaders had to take responsibility for doing virtually everything associated with advancing the religious dimension of the school. In collaboration with the principal and diocese it is recommended that schools undergo a major restructure in this space and create middle leadership positions to specifically support the religious education leader in enhancing the religious dimension of the school. Middle leadership positions could include areas such as; liturgy and prayer; social justice, retreats, faith development.

This study has identified some practical areas in which strategies could be implemented that would contribute towards sustaining school based religious education leadership in reaching the full term of their appointment. The complexities surrounding sustainability in this area require further research at an international level, focussing on what sustains and disconnects religious education leaders in religiously affiliated schools. Collective international insights would help to identify and advance additional ways forward in sustaining school based religious education leadership which is of fundamental importance to the survival of religious education as a discipline and promotion of and witness to Catholic identity in many schooling systems.

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## Impact of Reading Frequencies and Attitudes on Early Childhood Teachers' Teaching Efficacy for Sustainable Development

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### Abstract

The purpose of the study is to examine the impact of early childhood teachers' reading attitudes, the total number of the books they have read about their profession, the total number of the books they have read on general topics, and their teaching experience on their teaching efficacy. Participants consist of 362 early childhood teachers from 51 different cities in Turkey. Of the 362 participants, 333 are female (91%) and 29 are male (9%). The ages of the teachers range from 21 to 50, with a mean age of 27.47. The participants responded to a personal questionnaire; Early Childhood Teachers' Teacher Efficacy Scale (ECTTES) and Reading Attitude Scale (RAS). Stepwise regression analyses for subtests CM, SE, PI, P and for total teaching efficacy indicate that reading attitude and teaching experience are significant predictors. For subtest C, reading attitude and age appear as significant predictors. For subtest IS, only reading attitude appears as a significant predictor. Accordingly, in order to improve early childhood teachers' reading attitudes, book clubs and peer reading groups are recommended.

*Keywords:* early childhood teacher, reading frequency, reading attitude, teaching efficacy, sustainability.

### Introduction

A plethora of studies have revealed that self-efficacy is an important predictor of performance and a primary cause of the feelings of self-worth and perceived usefulness. Bandura (1997) indicated that teaching efficacy is a specific case of self-efficacy. Tschanen-Moran, Hoy and Hoy (1998) defined teaching efficacy as "the teacher's belief in his or her capability to organize and execute courses of action required to be successfully accomplished as specific teaching task in a particular context (p 233)." This definition

is accepted as the operational definition for teaching efficacy for the purpose of this study. The purpose of the study is to examine the relationship among early childhood teachers' self-report of their own teaching efficacy, the number and the types of the books they have read, and their reading attitudes.

Teaching efficacy has a direct impact on teachers' motivation, resilience, and performance and an indirect impact on students through their teachers. Studies have shown that teachers with a higher teaching efficacy belief than their colleagues display a higher commitment to teaching (Ware & Kitsantas, 2007, Fedosejeva et. al, 2018) and they experience higher job satisfaction in teaching, experiencing less stress (Tschannen-Moran, Hoy & Hoy, 1998) and less teacher burnout (Skaalvik & Skaalvik, 2007) during teaching. Teacher efficacy has an impact on teachers' use of teaching strategies. It was shown that efficacious teachers are more willing to implement new instructional ideas compared to their less efficacious colleagues (Gaith & Yaghi, 1997; Kabadayi & Bozkurt, 2015). In another study, Shchar and Shmulevitz (1997) have found that efficacious teachers are better at promoting learning in slow students than less efficacious teachers. It has been found that a high sense of teacher efficacy relates to less interventionist and more democratic classroom management (Gencer & Cakiroglu, 2007; Yeo, Ang, Chong, Huan & Quek 2008). Teachers with high teaching efficacy have been found to be more eager to adopt innovative teaching techniques than those with lower teaching efficacy (Gaith & Yaghi, 1997). These studies have revealed the impact of teaching efficacy on teachers' professional functioning. Better teachers mean better educational outcomes. Therefore, it is important to examine factors that could influence teachers' teaching efficacy (Kabadai, 2015) and it was claimed to contribute to sustainable professional development of teachers, which would increase their quality (El-Deghaidy, 2012; Zhukova, 2018; Drelinga, et al., 2016). Thus, it would be possible to increase teachers' teaching efficacy.

Studies have also shown that the students who have teachers with higher teaching efficacy have higher motivation (Mojavezi & Tamiz, 2012; Pan, 2014; Midgley, Feldlaufer, & Eccles, 1989), and display higher academic achievements (Shidler, 2009; Goddard, Hoy & Woolfolk-Hoy 2000; Muijs & Reynold, 2002; Caprara, Barbaranelli, Steca, & Malone, 2006; Goddard, Hoy & Woolfolk-Hoy, 2000; Muijs & Reynold, 2002; Ross, 1992; Shidler, 2009; Swanson, 2014; Tournaki & Podell, 2005; Tschannen-Moran & Johnson, 2011) than their peers who have teachers with lower teaching efficacy. The study of Muijs and Reynold (2002) is especially important because they have found that teachers' self-efficacy is related to student achievements even when it is controlled for prior achievements and background factors. They have also found that efficacious teachers are more open to innovations, more willing to work on their professional and personal improvement than less efficacious teachers. That is, students with more efficacious teachers perform better academically and are expected to do better in the future than their peers who have teachers with a low sense of teacher efficacy (Kotaman, 2010).

### **Knowledge and Teaching Efficacy**

Above-mentioned studies have emphasized the contribution of teachers' teaching efficacy beliefs on teachers' teaching performance and educational outcomes. Therefore, a plethora of studies have examined the factors that are related to teaching efficacy. Thus, it would be easier to implement applications which would increase current and prospective teachers' teaching efficacy beliefs.

Since the mastery experiences are the most effective sources of self-efficacy (Bandura, 1977, 1986), many studies have focused on the relationship between teacher training and teaching efficacy (Henson 2001; Tschannen-Moran, Woolfolk-Hoy & Hoy, 1998; Woolfolk-Hoy & Burke-Spero, 2005). Effective teachers experience the mastery experiences and the characteristics of effectiveness in order to achieve a good command of content and pedagogical knowledge, and they are informed about a broad range of subjects (Bélanger and Longden 2009; Colker 2008; Watson et al. 2010). Bandura (1986) has pointed out that the knowledge level of individuals on a certain task may affect their level of efficacy on that task. Therefore, it is reasonable to expect that current and/or prospective teachers' high level of content and pedagogical (educational principles, alternative instruction techniques, etc.) and general knowledge might be related to teaching efficacy. Recent intervention studies have revealed that improving content (understanding the content to be taught) and cognitive pedagogical mastery (success in understanding how to teach a subject) increase prospective (An, Tillman & Paez, 2015; Bautista & Boone, 2015; Can, 2015; Çinici, 2016; Flores, 2015; McCall, 2017; Sancar-Tokmak, 2015; Tatar & Buldur, 2013; Kabadayı, 2007) and current teachers' teaching efficacy (Chao & Ho; 2016; Telese, 2016). For example, Sancar-Tokmak (2015) investigated the impact of curriculum-generated play instructions in mathematics on the teaching efficacies of early childhood education pre-service teachers. Every week, investigators adopted activities about such curriculum-generated play instructions as individually finding play activities according to the selected mathematical subject, preparing a curriculum-generated play lesson plan in 16-week Play in Early Childhood course, which is offered to prospective teachers in their second year. Sancar-Tokmak (2015) has found a significant increase in prospective early childhood teachers' mathematic teaching efficacy. Qualitative findings gathered through structured interviews with participating prospective teachers support quantitative findings. Prospective early childhood teachers stated that "we gained information about the early childhood mathematics program, instruction design, finding play activities suitable for instruction, learning how to teach using play activity, pedagogy and learning a variety of play activities to be used in the education (Sancar-Tokmak, 2015, p. 16)." Thus, they also mentioned that they believed that they would be able to teach mathematics after the course better (Sancar-Tokmak, 2015).

The above-mentioned studies have revealed the importance of content and pedagogical knowledge in the formation of teaching efficacy. Reading is one of the most important tools for obtaining information and learning (Cuningham & Stanovich, 1997; Spira, Bracken, & Fischel, 2005; McGuinness, 2004; Chall, 1996). Therefore, reading enables lifelong learning and development (Kızılet, 2017). Continuous learning and development are the basic qualities of good teachers (Bélanger & Longden, 2009; Colker 2008; Watson et al., 2010). Therefore, it is reasonable to assume that teachers who are good readers can improve their content and pedagogical knowledge through reading. Life-long learning and development are compatible with sustainable teacher development because teachers should be able to meet the needs of today's students as well as prospective students. Teachers can achieve the professional development through sustainable teacher development (Hiller & Reichart, 2017; Fedosejeva et. al. 2018; Salite, et. al., 2016).

Several studies have investigated the relationships between the reading attitudes and the reading habits of current and prospective teachers. Studies have revealed a positive relationship among prospective teachers' reading attitudes, reading habits and

critical thinking skills (Kırmızı, Fenli & Kasap, 2014; Kızılet, 2017). That is, prospective teachers' critical thinking ability is increased with their positive attitudes toward reading and the number of the books they have read or the time they allocate for reading. Studies with teachers have shown that teachers who have more positive attitudes toward reading and who read more than their colleagues use a greater number of instructional practices associated with the best practices (McKool, 2009; Burgess, Sargen, Hill & Morrison, 2011; Haverback). All these studies have exhibited the importance of reading habits and attitudes for teacher development. Therefore, reading can be an indispensable tool for sustainable teacher development. However, to the authors' knowledge, no studies have investigated the possible relationship between early childhood teachers' teaching efficacy, their sustainability and their reading attitudes and habits.

Early childhood teachers deal with small children who are curious. They have a wide range of interests and ask a lot of questions about the subjects that they are interested especially in story reading (Kabadayi, 2005).

Therefore, an early childhood teacher should be knowledgeable, at least at a basic level, on many subjects. As it was mentioned above a good teacher should have a good command of content and pedagogical knowledge. Reading is a tool, which would support early childhood teachers in their efforts to improve their content, pedagogical, and general knowledge thus, it would serve for early childhood teachers' sustainable development as it is really an effective tool to sustain the future teachers (Hiller & Reichart, 2017). Since several studies revealed an association between teaching efficacy and teachers' level of pedagogical and content knowledge (Şaşmaz-Oren, Ormanlı, & Evrekli 2011, Siegel & Wissehr, 2011), it is reasonable to investigate the relationship between early childhood teachers' teaching efficacy, their attitudes toward reading and their reading habits. Thus, the purpose of this study is to investigate the relationship among early childhood teachers' teaching efficacy, their reading attitudes, the total number of the books they have read about their profession, and the total number of the books they have read on general topics. The study also aims to display the numbers and averages of early childhood teachers' general and profession-related books.

## Method

Originally, 391 questionnaires were returned to the investigators. However, among 391 questionnaires, 29 had missing data. Therefore, they were discarded from the data set. Finally, the data set of the study consisted of 362 questionnaires from 51 different cities in Turkey. There are 83 cities in Turkey. Of the 362 early childhood teachers, 333 were female (91%) and 29 were male (9%). The ages of the teachers ranged from 21 to 50, with a mean age of 27.47 (SD= 4.5). The teachers' experiences ranged from 1 to 20 years, with a mean of 4,37 (SD= 3,52).

## Instruments

The participants responded to a personal questionnaire: Early Childhood Teachers' Teacher Efficacy Scale (ECTTES) developed by Tepe and Demir (2012) and Reading Attitude Scale (RAS) developed by Gömleksiz (2004). The personal questionnaire contained six questions, which were about the participants' gender, age, and years of experience in teaching, the total number of books they have read on general topics, and

the total number of books they have read on early childhood teaching. The ECTTES is a reliable and valid instrument that contains 37 items and it is divided into six sub-dimensions: efficacy for instructional strategies (IS; five items, e.g., “I can design learning environments to foster problem solving skills”); classroom management (CM; six items, e.g., “I can control students’ disruptive behaviours in the classroom”); communication (C; seven items, e.g., “I can praise children’s positive behaviours”); student engagement (SE; nine items, e.g., “I can encourage children to express themselves”); parent involvement (PI; five items, e.g., “I can involve parents in decision making processes”) and planning (P; five items, e.g. “I can determine developmentally appropriate goals for children”). The participants were asked to respond to each item in terms of their level of belief in being able to achieve each item. The responses ranged from 1 (Never) to 5 (Always). High scores on every subscale indicated higher levels of teaching efficacy. In the current study, Cronbach alpha coefficients for the general and sub dimensions (IS, CM, C, SE, PI, P) of ECTTES were found to be 0.964, 0.836, 0.836, 0.816, 0.894, 0.867, 0.856 respectively.

RAS is a five point Likert type scale. It contains 21 positive and 9 reverse items on attitudes towards reading (Gömleksiz, 2004). Maximum and minimum scores which can be obtained from RAS are 150 and 30 respectively. RAS does not have sub-dimensions. Cronbach alpha coefficients for RAS were found to be 0.875. These Cronbach’s coefficients are considered to be indicative of sound reliability for education (Issac & Michael 1995).

## Data Collection

The data were collected through the personal dissemination of online surveys and questionnaires. The investigators prepared online versions of questionnaires and announced them through social media such as Facebook, Twitter, Instagram, Whatsapp, etc. Thus, the investigators reached their former students who were currently working as early childhood teachers and created a message chain to reach the maximum number of early childhood teachers. Beside online application, the investigators also visited schools in the city centre and, after they explained the purpose of the study to teachers and informed them that they could quit any time, they gave questionnaires to the teachers who indicated a willingness to participate and left the school. The teachers answered the questionnaires privately. A week later, the investigators visited the same schools again and gathered the questionnaires.

## Results

Table 1  
*Descriptive Statistics for Teacher Reading*

	Max	Min	Average
Total Number of Books	1500	4	237
Professional Books	700	0	43

Descriptive statistics revealed the maximum minimum number, the total number of the general topic books and the total number of the professional books read by the teachers. Several stepwise multiple regressions were calculated to predict the total and

the six sub-dimensions of the early childhood teachers' teacher efficacy (IS, CM, C, SE, PI, P) based on their age, years of experience, reading attitudes, the total number of the books they have read about their profession, and the total number of the books they have read on general topics. The teachers' ages and years of experience were included in the analysis because previous studies indicated that these variables were among the predictors of teachers' efficacy.

The total number of the general topic books read by the teachers ranged between 4 and 1500. The average numbers of the general topic books read by the teachers were 237. The total number of the professional books read by the teachers ranged between 0 to 700. The average number of the professional books read by teachers was 43.

Table 2  
*Stepwise Regression for IS, CM, C, SE, PI, P and Total Teaching Efficacy Score*

	B	SE b	$\beta$	Adjusted $R^2$	$R^2$ Change	F
Constant	9.828	1.58				
Reading Att.	0.085	0.012	0.344*	0.116*	0.118	48.86
Constant	12.97	1.69				
Reading Att.	0.089	0.013	0.335*	0.109*	0.112	
Teaching Exp.	0.153	0.041	0.183*	0.141*	0.033	30.86
Constant	13.41	1.88				
Reading Att.	0.115	0.013	0.422*	0.175*	0.177	
Age	0.096	0.031	0.145*	0.194*	0.021	44.89
Constant	17.609	2.318				
Reading Att.	0.161	0.018	0.428*	0.180*	0.183	
Teaching Exp.	0.148	0.055	0.126*	0.194*	0.016	44.96
Constant	4.145	1.923				
Reading Att.	0.116	0.015	0.375*	0.138*	0.140	
Teaching Exp.	0.196	0.046	0.203*	0.177*	0.041	40.21
Constant	9.231	1.602				
Reading Att.	0.088	0.012	0.351*	0.120*	0.123	
Teaching Exp.	0.093	0.038	0.118*	0.132*	0.014	28.78
Constant	69.146	9.253				
Reading Att.	0.654	0.071	0.432*	0.184*	0.186	
Teaching Exp.	0.755	0.221	0.159*	0.207*	0.025	48.76

\* $p < 0.001$

For IS, regression analyses indicated reading attitudes as a significant predictor. A significant regression equation was found ( $F(1,364) = 48,86$   $p < 0.0001$  with an adjusted  $R^2$  0.116). The participants' predicted IS was equal to  $9,83 + 0.085$  (reading attitudes). The participants' IS increased 0.085 points for each point that they received from reading attitudes. Reading attitudes were a significant predictor of the early childhood teachers' teacher efficacy for IS. It explained 11% of the variance in IS.

For CM, regression analyses showed teaching experience and reading attitudes as significant predictors. A significant regression equation was found ( $F(2,363) = 45,86$   $p < 0.0001$  with an adjusted  $R^2$  0.142). The participants' predicted CM was equal to  $13,67 + 0.096$  (reading attitudes)  $+ 0.153$  (teaching experience). The participants' CM increased 0.089 points for each point that they received for reading attitude and 0.153 points for each year that they spent in their profession. Reading attitudes and teaching

experience were the significant predictors of the early childhood teachers' teacher efficacy for CM. Together, they explained 14% of the variance in CM. The unique contributions of each independent variable (reading attitudes and teaching experience) for predicting CM were 11% and 3% respectively.

For C, regression analyses indicated reading attitudes and ages as significant predictors. A significant regression equation was found ( $F(2,363) = 44,89$   $p < 0.0001$  with an adjusted  $R^2$  0.194). The participants' predicted C was equal to  $13,41 + 0.115$  (reading attitudes)  $+ 0.096$  (ages). The participants' C increased 0.115 points for each point that they received for reading attitudes and 0.096 points for each year that they lived. Reading attitudes and ages were the significant predictors of the early childhood teachers' teacher efficacy for C. Together, they explained 19% of the variance in C. The unique contributions of each independent variable (reading attitudes and ages) for predicting C were 17% and 2% respectively.

For SE, regression analyses indicated reading attitudes and teaching experience as significant predictors. A significant regression equation was found ( $F(2,363) = 44,96$   $p < 0.0001$  with an adjusted  $R^2$  0.194). The participants' predicted SE was equal to  $17,609 + 0.161$  (reading attitudes)  $+ 0.148$  (teaching experience). The participants' SE increased 0.161 points for each point that they received for reading attitudes and 0.148 points for each year that they have worked as an early childhood teacher. Reading attitudes and teaching experience were the significant predictors of the early childhood teachers' teacher efficacy for SE. Together, they explained 19.9% of the variance in SE. The unique contributions of each independent variable (reading attitudes and teaching experience) for predicting SE were 18% and 1.9% respectively.

For PI, regression analyses indicated reading attitudes and teaching experience as significant predictors. A significant regression equation was found ( $F(2,363) = 40,209$   $p < 0.0001$  with an adjusted  $R^2$  0.177). The participants' predicted PI was equal to  $4,145 + 0.116$  (reading attitudes)  $+ 0.196$  (teaching experience). The participants' PI increased 0.116 points for each point that they received for reading attitudes and 0.196 points for each year that they worked as an early childhood teacher. Reading attitudes and teaching experience were the significant predictors of the early childhood teachers' teacher efficacy for PI. Together, they explained 18% of the variance in PI. The unique contributions of each independent variable (reading attitudes and teaching experience) for predicting PI were 14% and 4% respectively.

For P, regression analyses indicated reading attitudes and teaching experience as significant predictors. A significant regression equation was found ( $F(2,363) = 28,787$   $p < 0.0001$  with an adjusted  $R^2$  0.132). The participants' predicted P was equal to  $9,231 + 0.088$  (reading attitudes)  $+ 0.093$  (teaching experience). The participants' P increased 0.088 points for each point that they received for reading attitudes and 0.093 points for each year that they worked as an early childhood teacher. Reading attitudes and teaching experience were the significant predictors of the early childhood teachers' teacher efficacy for P. Together, they explained 13% of the variance in P. The unique contributions of each independent variable (reading attitudes and teaching experience) for predicting P were 12% and 1% respectively.

For the total teacher efficacy score, regression analyses indicated reading attitudes and teaching experience as significant predictors. A significant regression equation was found ( $F(2,363) = 48,764$   $p < 0.0001$  with an adjusted  $R^2$  0.207). The participants' predicted total efficacy was equal to  $69,146 + 0.654$  (reading attitudes)  $+ 0.755$  (teaching

experience). The participants' total efficacy increased 0.654 points for each point that they received for reading attitudes and 0.755 points for each year that they worked as an early childhood teacher. Reading attitudes and teaching experience were the significant predictors of the early childhood teachers' total teacher efficacy. Together, they explained 20% of the variance. The unique contributions of each independent variable (reading attitudes and teaching experience) for predicting the total teacher efficacy were 18% and 1% respectively.

### Discussion

The sub-purpose of the study was to figure out early childhood teachers' reading frequencies. In this study, the early childhood teachers reported an average of 237 general topic books and 43 professional books with ranges between 4 and 1500 and between 0 and 700 respectively. These numbers are not in line with the other studies that had reported reading frequencies of the Turkish public and the Turkish elementary and middle school teachers (Odabaşı, 2005; Aslantürk, & Saracaloğlu, 2010; Konan & Oğuz, 2013). Odabaşı (2005) reported that Turkish people annually read one sixth of a book. Aslantürk, and Saracaloğlu, (2010) have found that elementary school teachers read 1.5 books per month. In another study, Konan and Oğuz (2013) emphasized that 59% of the elementary and middle school teachers did not read regularly and 55% of them read less than five books the previous year. In consideration with the mean age (27.47) of the participants, it seems that early childhood teachers read more than the general public and the elementary school teachers. The Turkish elementary school curriculum is more subject-oriented than the early childhood school curriculum. In the elementary school curriculum, there are certain subjects to teach such as reading, writing, arithmetic, problem solving, and social studies. Compared to the early childhood school curriculum, it is a more teacher-directed program. The early childhood school curriculum is more flexible and open-ended compared to the elementary school curriculum. Therefore, early childhood teachers may encounter more questions than elementary school teachers and they may feel obligated to equip themselves. In order to do that, they may read more than elementary school teachers. However, we have to keep in mind the self-reported nature of the data which allows inflation of numbers.

The main purpose of the study was to examine the impact of teachers' reading attitudes, years of experience, ages, the number of the books they read and the number of the professional books they read on their teaching efficacy. For all the subtests of teacher efficacy such as instructional strategies (IS), classroom management (CM), communication (C), student engagement (SE), parent involvement (PI), planning (P) and their total, reading attitudes appeared as a significant predictor. Stepwise regression analyses for the subtests CM, SE, PI, P and for the total teaching efficacy indicated reading attitudes and teaching experience as significant predictors. For the subtest C, reading attitudes and ages appeared as significant predictors. Neither teaching experience nor ages were among the significant predictors for SE. Stepwise regression revealed reading attitudes as the sole predictor of IS. All analyses yielded reading attitudes as the main predictor. The highest rate of the variance that was explained by teaching experience was 4%, which was for PI. Ages explained 2% of all the variance for C.

Mastery experiences are known as the most effective sources of self-efficacy (Bandura (1977; 1986). It is also true for teaching efficacy (Chao & Ho, 2016; Telese, 2016;

Kotaman, 2010). Therefore, the appearance of teaching experience as a predictor for five out of the six subtests and the total teaching efficacy score is consistent with the teaching efficacy literature. Only in C (communication) subtest, ages entered into the model as one of the predictor variables. The findings revealed that as ages increased, so did the communication efficacy of the teachers. Older teachers may be parents longer than younger teachers and that may positively affect their communication skills.

Teaching is an intellectual profession. We live in an age of information and knowledge which requires lifelong learning. Therefore, sustainable professional teacher development is a necessity for teachers (El-Deghaidy, 2012; Hiller & Reichart, 2017; Zhukova, 2018) because, in order to awaken students' interests, guide them in their efforts to construct, transform and acquire knowledge, teachers have to be well-equipped. Thus, reading functions as an effective tool that would enable teachers' sustainable professional development for their lifelong development and improvement (Bélanger and Longden 2009; Colker 2008; Watson et al. 2010; Cunnigham & Stanovich, 1997). The findings of the study partially emphasize the importance of reading attitudes for teachers. Reading attitudes appeared as a significant predictor of all the subtests and the total teaching efficacy score. As the teachers' reading attitudes increased, so did their teaching efficacy. Several studies revealed the positive relationship between prospective teachers' reading attitudes and their teaching related competencies such as critical thinking skills and reading habits (Kırmızı, Fenli, & Kasap, 2014; Kızılet, 2017). For example, in their study, Kırmızı, Fenli and Kasap (2014) investigated prospective teachers' reading attitudes and critical thinking skills. Two hundred twelve prospective teachers participated in their study. They have found a positive and significant relationship between reading attitudes and critical thinking skills such as being open-minded, analysing facts, being curious, searching for facts and thinking systematically. Another study that Benevides and Peterson (2010) conducted with 227 prospective K-12 teachers revealed that participants' reading habits and attitudes were correlated significantly with high and composite reading and writing scores. Teachers' positive attitudes toward reading is important because they can be good models for their students and, thus, support the development of positive reading attitudes in their students (Benevides & Peterson 2010). However, having positive reading attitudes does not guarantee reading. Reading frequencies and reading attitudes are expected to be related but they are still two different things.

Although reading attitudes appeared as the main predictor of teaching efficacy, the number of general topic and professional books did not enter into the model as a predictor for neither the subtests nor the total teaching efficacy. Several studies revealed that although teachers emphasized the importance of reading, they themselves had not read as much as a person who would value reading (Mckool, & Gespass, 2009; Rimensberger, 2014). Mckool and Gespass (2009) have found that while most elementary school teachers value reading, only half of them read for pleasure on a daily basis. In another study, Rimensberger (2014) in South Africa reached similar findings. In his study, prospective teachers displayed positive attitudes toward reading and they strongly agreed on the importance of reading. However, they spared very little time for reading. Therefore, there may be discrepancy between participants' reading attitudes and their actual reading performances. On the other hand, a strong relationship between reading attitudes and reading behaviours is expected. Therefore, it is reasonable to claim that these variables work in accordance as independent variables. Therefore, as the main predictor of teaching

efficacy, reading attitudes may have shadowed the variables about reading behaviours. Even though attitudes and behaviours are not the same, our data have revealed the importance of reading attitudes for early childhood teachers' teaching efficacy. This outcome is consistent with teaching efficacy literature because it has been defined as a belief (Bandura, 1997; Tschannen-Moran, Hoy, & Hoy 1998).

### **Implications**

As it was mentioned above, compared to their colleagues with less teaching efficacy, teachers with higher teaching efficacy tend to be more open to the use of new instructional ideas and strategies, to be better at promoting learning of slow students, to display higher professional commitment, motivation, job satisfaction and less teacher burnout and to have more academically successful students (Shidler, 2009; Goddard, Hoy, & Woolfolk-Hoy 2000; Muijs & Reynold, 2002; Gaith & Yaghi, 1997; Shchar & Shmuelevitz, 1997; Skaalvik & Skaalvik, 2007; Tschannen-Moran, Hoy, & Hoy, 1998; Ware & Kitsantas, 2007). Therefore, increasing teachers' teaching efficacy is a worthwhile effort, which would support their sustainable professional development. The study revealed reading attitudes as a significant factor that is related to all the dimensions of early childhood teachers' teaching efficacy beliefs. Therefore, efforts to increase early childhood teachers' reading attitudes may have a positive impact on their teaching efficacy beliefs. Braithwaite (1999) stated that "It apparently does matter what teachers think. The evidence is that teaching is a complex and cognitively and attitudinally demanding task and that beliefs affect implementation processes and to some degree, student outcomes" (p. 20). Therefore, striving for increasing early childhood teachers' reading attitudes may be worthwhile. It may increase their actual reading and, in return, a positive effect may occur for both themselves and their students. Book clubs and peer reading groups can be promoted among teachers in order to foster reading.

### **Limitations**

The data were gathered from self-reports from volunteer participants. These were the main limitations of the study. It is possible that the teachers who read more were willing to participate in the study. We asked the teachers the total number of the general topic and professional books they read until then. They may have difficulty figuring out the exact number. Therefore, there may be some deviations in the data. Also, because reading is a socially respected habit and the society demands exemplary behaviours from teachers, the teachers may have inflated the numbers they reported. Future studies can focus on these issues. For example, asking teachers for library memberships and how many books they have borrowed or listing the names of the books they have read may improve the validity of the data. Also, the impact of the types of the books that teachers read on their teaching performances and on the other aspects of the professional life such as job satisfaction and burnout can be investigated in the future studies.

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# Technical and Vocational Education and Training Curricula at the Lower Secondary Level in Jamaica: A Preliminary Exploration of Education for Sustainable Development Content

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## Abstract

Education for Sustainable Development (ESD) is critical for Caribbean countries such as Jamaica as the country grapples with various sustainability issues. The integration of ESD into formal and non-formal education therefore becomes a necessary undertaking. At the formal level, reorienting curricula at all levels is important and advocated for in various international documents such as *Agenda 21* and by agencies such as the United Nations Educational, Scientific and Cultural Organization. With this in mind, this study utilised a qualitative content analysis approach to undertake a preliminary exploration of ESD content in TVET curricula at the lower secondary level (grades 7–9) in Jamaica. Analysis of three of the subjects as taught in the TVET area of Resource and Technology revealed that though ESD issues, perspectives and skills are integrated into various components of the curriculum, many of the ESD issues, perspectives and skills the research sought to identify were not evident in the curricula. Additionally, based on the analysis, it was felt that the curriculum lacks alignment among the components (objectives, content, learning experience, assessment, teaching strategies) that reflected ESD content, and that there is need for integration of more such content in the curricula to ensure that TVET and ESD yield the relevant benefits.

*Keywords:* vocational education, curricula, sustainable development.

## Introduction

Education for Sustainable Development (ESD) is a critical imperative for the global community and, in particular, for Small Island Developing States (SIDS) such as those in the Caribbean region which struggle with various social, environmental, and economic issues. The Caribbean island of Jamaica, the largest English speaking island in the region, is one such nation that grapples with a range of sustainability issues, including social problems such as high rates of crime and violence, poor educational performance, and increases in lifestyle related chronic diseases; environmental issues, for instance water pollution and waste management; economic issues including periods of poor economic

growth and unemployment amongst youth aged 15–24 years; and governance concerns such as inefficiencies in the nation’s justice system and erosion of social trust (PIOJ, 2009). Education for Sustainable Development, with its two tiered focus on (i) reorienting education towards sustainable development and (ii) strengthening education and learning to support sustainable development is critical for the nation.

Technical and Vocational Education and Training (TVET) is a critical and growing area in Caribbean nations such as Jamaica. Given this growth, it is important that ESD is integrated into TVET; indeed, this is part of the mandate of *Agenda 21*, which speaks to its integration into vocational and other training programmes (UNCED, 1992). The United Nations Educational, Scientific and Cultural Organization (UNESCO) points out that “ESD and TVET are powerful forces that can help people to become active and ecologically responsible citizens, workers and consumers, able to address local and global challenges” (UNESCO, 2012). They further point out that there are overlaps between ESD and TVET including a focus on problem-solving, education for sustainable consumption and lifestyles, and entrepreneurial learning.

With this in mind, this research sought to address the following main research question: In what ways is ESD infused into TVET curricula of the National Standards Curriculum (NSC) in Jamaica? In particular, we focused on the following sub-research questions:

1. How is ESD manifested in the general philosophy of the NSC?
2. What ESD issues, values and skills are reflected in the TVET curricula of the NSC?
3. In what ways are these ESD issues, values, and skills integrated into the TVET curricula of the NSC?

### **Education for Sustainable Development**

Sachs (2015) defines a good society (a sustainable society) as one which encompasses economic prosperity, social inclusion, environmental sustainability, and good governance. *Agenda 21*, a major document resulting from the 1992 United Nations Conference on Environment and Development (UNCED) outlines a global blueprint for achieving sustainable development with Chapter 36 specifically devoted to the role of education. In this Chapter, three programme areas are highlighted – the reorientation of education towards sustainable development, public awareness, and training. Education for sustainable development is a necessary precursor to the development of knowledge, attitudes, values, skills, and behaviour which align with sustainability. The UNESCO conceptualises ESD thus: “ESD empowers learners to take informed decisions and responsible actions for environmental integrity, economic viability and a just society, for present and future generations, while respecting cultural diversity. It is about lifelong learning, and is an integral part of quality education. ESD is holistic and transformational education which addresses learning content and outcomes, pedagogy and the learning environment. It achieves its purpose by transforming society” (UNESCO 2014a, p. 12). Davis (cited in Pearson & Degotardi 2009, p. 98) articulates that formal ESD is intended “to promote more sustainable approaches to patterns of living and development in future generations.”

Further than this, ESD has as its focus two interrelated realms. The first is the integration of sustainable development into education and the second is the integration of education into sustainable development (UNESCO, 2014a). With respect to the first, the idea is that sustainable development issues and related content, as well as values

and skills, would be integrated into education at all levels – formal, non-formal, and informal – in order to equip individuals to live sustainably. In terms of the latter, the importance of the focus underscores that education itself is critical for societies to be sustainable. Indeed, education is implicit in all of the Sustainable Development Goals (SDGs) which now drive the international agenda.

Globally, ESD has been driven by the United Nations (UN), principally through UNESCO. Following on from the Decade of Education for Sustainable Development (DESD) from 2005–2014, during which activities in the field were intensified, UNESCO launched the Global Action Programme (GAP) on ESD at the UNESCO World Conference on Education for Sustainable Development held in Aichi-Nagoya, Japan, 2014. This was the result of a call for urgent action “to further strengthen and scale up Education for Sustainable Development in order to enable current generations to meet their needs while allowing future generations to meet their own, with a balanced and integrated approach regarding the economic, social and environmental dimensions of sustainable development” (UNESCO, 2014b, p. 1).

Importantly, ESD forms an important part of the SDGs, adopted by world leaders at the 2015 UN Summit. Under SDG Four, Target 4.7 calls for the following:

*“By 2030 ensure all learners acquire knowledge and skills needed to promote sustainable development, including among others through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture’s contribution to sustainable development”* (The UN Open Working Group proposal on the Sustainable Development Goals).

### **Education for Sustainable Development and Curricula Development**

As indicated, international blueprints such as *Agenda 21*, initiatives such as the DESD and the GAP, as well as global forums throughout the decades, have highlighted the need to reorient education to address sustainability. Part of this reorientation involves the review of curricula within formal education. As one of the activities outlined in Chapter 36 of *Agenda 21*, countries are advised that: “A thorough review of curricula should be undertaken to ensure a multidisciplinary approach, with environment and development issues and their socio-cultural and demographic aspects and linkages. Due respect should be given to community-defined needs and diverse knowledge systems, including science, cultural and social sensitivities” (UNCED, 1992, 36.5b).

A second component involves the integration or infusion of ESD content into curricula. The current GAP on ESD highlights ‘learning content’ as one of the key dimensions of ESD and advises that issues such as climate change, biodiversity, disaster risk reduction, and sustainable consumption and production be integrated into curricula as these are critical sustainability issues (UNESCO, 2014a). McKeown (2002) and UNESCO (2012) advise that the reorientation of curricula necessitates that ESD knowledge, issues, perspectives, skills, and values in the various spheres of sustainability (environment, society, and economy) have to be considered and incorporated. The UNESCO (2017) emphasises that this integration has to take place in curricula at all levels, identifying early childhood care and education, primary, secondary, and higher

education, and TVET. They further write that ESD “must become an integral part of teaching and learning of core subjects (e.g. math, sciences, social studies and languages”, that “learning objectives, teaching and learning methods and assessment measures are closely aligned so that they reinforce each other” and that “progressive learning objectives should be established, i.e. learning that builds competencies from level to level (scaffolding)” (UNESCO, 2017, p. 51).

### Technical and Vocational Education and Training

The UNESCO (2010) defines TVET as those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupation in various sectors of economic life. This definition presents TVET as broad based and all-encompassing, reflecting dimensions that are also implicitly embedded. For example, such a definition presents TVET with an opportunity to raise critical consciousness through general education and the study of technology and related sciences (Chisolm, 2009).

Internationally, there is overwhelming evidence that shows the essential role of TVET in promoting economic growth of countries and socio-economic benefits for individuals, their families, and society in general (Maclean, 2011). Essentially, TVET can help to provide more choices for citizens and empower individuals who would otherwise be marginalised (Maclean, 2005). Commenting on the role of TVET, del Mar (2011) argued that TVET should be an integral part of general education, preparation for responsible citizenship and an instrument for promoting environmentally sound sustainable development. Furthermore, TVET forms the foundation for a sustainable good quality primary education (Morris, 2016).

According to Pavlova (2014), while many countries recognise the huge benefits to be accrued from TVET, there is a difference between developed and developing countries responses. Pavlova notes that while developed countries emphasise quality improvement, monitoring and evaluation of TVET systems and availability of national development plans, developing countries emphasise the cost of enrolment and implementation of TVET. Therefore, simply recognising TVET as important will not yield the benefits that it provides. A clear strategy for TVET at the macro, meso and micro levels must be established and acted upon to ensure that TVET yields benefits such as poverty reduction, increasing equality, responsible citizenship and responsible environmental practices. This will aid a country’s advancement towards social inclusion and cohesion. In addition to several initiatives and programmes such as Education for All that seek to ensure the benefits of TVET, the Bonn Declaration on Learning for Work, Citizenship and Sustainability (2004), states that countries need to ensure:

*“... approaches to development that harmonize economic prosperity, environmental conservation and social well-being. We therefore call for responses to globalization that humanize rather than marginalize, and for applications of information and communication technology that narrow the digital divide” (p. 2)*

## **Technical and Vocational Education and Training and Education for Sustainable Development**

Though previously seen as second-class education in many countries, increasingly TVET has been gaining popularity as one of the critical means of achieving ESD. Education for Sustainable Development and TVET are critical for helping people to become more responsible citizens who are able to address both global and local challenges. Among the strategies used by countries to ensure TVET plays its role in ESD is reform in national TVET curricula.

While TVET is recognised as critical to sustainability, policy makers and practitioners may have different views as to what TVET for sustainability should look like. Morris (2016) notes that key features must include a clearly established policy framework, industry relevance, urban-rural integration, social and economic responsiveness, career focus, and high-quality orientation. Additionally, since ESD is about changing the way people think and act, TVET for sustainability must be about using TVET as the means to equip individuals with the values, skills and knowledge needed for a sustainable future. Because TVET in its highest quality is about development, ensuring ESD through TVET is about ensuring that as individuals create and innovate and pursue an improved quality of life, they derive a balanced perspective on environmental, societal, and economic considerations as citizens (McKeown, 2002). This perspective is critical since one of the major challenges concerning TVET with respect to sustainable development is the greening of economies (Maclean, Jagannathan and Sarvi, 2013). To achieve ‘greening’ of the TVET curriculum, the application of the 6Rs – reduce, reuse, renew, recycle, repair and rethink perspectives – are integral along with generic skills such as adapting to varied situations, thinking critically and creatively, resolving conflict peacefully, and working honestly and responsively (UNESCO-UNEVOC, 2010).

The more workers are exposed to sustainability concepts and skills, the more they are likely to integrate these in their job functions and lifestyle. UNESCO-UNEVOC (2009) notes that it is best to teach these concepts before a worker starts his profession and then provide continuous up-skilling while the worker is in the profession. Integrating ESD in the TVET curriculum however is no easy undertaking. A study commissioned by UNESCO-UNEVOC (2010) to document cases studies of ESD in TVET curriculum in Botswana, Kenya, Malawi, Mauritius and Zambia revealed that while attempts at integrating ESD were taking place and its importance was recognised, there was limited understanding of the concept of ESD among most of the TVET educators, lack of expertise in ESD, lack of relevant learning materials, and lack of time to update courses. Achieving goals of ESD in TVET must therefore address the conceptual and practical dimensions of curricula as it is planned and executed at the macro, meso and micro levels.

### **The Jamaican Context: Curricula, Technical and Vocational Education and Training, and Education for Sustainable Development**

#### **Curricula and Technical and Vocational Education and Training**

Within Jamaica, a centralised approach is used for the development and dissemination of curricula at the early childhood, primary and secondary levels of the education system. This means that education policy development and implementation in this country is led by the Ministry of Education, Youth and Information (MOEY&I) as the

central authority of the government. Through the MOEY&I, there have been efforts to develop curricula to respond to the specific needs of the Jamaican/Caribbean culture and people. To respond to these needs, the MOEY&I has developed a slogan which states “every child can learn, every child must”. Through this Ministry, several education policies have been articulated which gave rise to the development and implementation of curriculum policy by the Core Curriculum Development Unit (CCDU) within this Ministry. Education is a dynamic process, hence, as society and the needs of learners change our curriculum practices must change to meet these needs. The CCDU therefore has responsibility for the development and dissemination of curricula for pupils at the pre-primary to lower secondary levels of the education system.

According to Cuadra and Moreno (2015), the demand for high quality, relevant education is forcing education systems everywhere to respond and adapt. This is no different for Jamaica. Jamaica’s most recent curriculum reform initiative has been implemented in 2016. Referred to as the National Standards Curriculum (NSC), the reform has been developed and implemented at both primary (grades 1–6) and lower secondary levels (grades 7–9) of the education system. The development of the NSC is a response to the need for improvement in curricula offering that add value to the lives of students. It seeks to ensure a clear progression of students from each grade to the next, ensure students are well prepared to master examinations at the different levels, include an approach of continuous assessment, and create a greater focus on concepts, skills and competencies to balance the current over-emphasis on the acquisition of content. This, it is hoped, will allow students to transition better to the different levels and achieve the core competencies and outcomes relevant for each level.

At grades one to three, the NSC reflects a fully integrated approach to teaching and learning. Emphasis here is on early literacy and numeracy through the teaching of the following subjects: Civics, Drama, Information and Communication Technology, Language and Literature, Mathematics and Music, Physical Education, Religious Education, Resource and Technology (R&T), Science, Social Studies and Visual Arts. At grades one to four, the emphasis is on problem solving in context through discrete subjects such as Language and Literature, Mathematics, Science and Social Studies while using themes from Civics, Drama, Information and Communication Technology, Foreign Languages, Visual Arts, Religious Education, and R&T. At grades 7–9, the curriculum focuses on problem-solving through pathways. This is facilitated through discrete subjects such as Civics, Drama, Information and Communication Technology, English Language and Literature, Mathematics, Music, Physical Education, Religious Education, R&T, Chemistry, Physics, Biology, Social Studies, Dance, Visual Arts and Integrated Science (Ministry of Education Youth and Information Paper No. 47/16).

A critical component of the NSC is the mainstreaming of TVET since it is recognised as a necessary component for economic and sustainable development (Maclean, 2011). At the primary level TVET is reflected through the teaching of R&T while at the secondary level TVET is reflected through a combination of R&T areas for three years (grades 7–9) and specialisation in specific TVET subjects for two or three years (10–12 or 10–13). For the purposes of this study, TVET through R&T at grades 7–9 is emphasised.

Resource and Technology at grades 7–9 consists of four areas – Industrial Techniques, Consumer Management, Business Studies, and Agriculture. The aim of R&T at this level is to use the principles of Science, Technology, Engineering and Mathematics infused with the Technical Vocational standards to foster students’ awareness of founda-

tional technical skills and their relationship to future careers and occupations. Resource and Technology in the NSC is based on four strands: creativity and innovation, exploring methods and procedures, applying solutions and career pathways. Through project-based and problem-based learning, R&T aims to foster critical thinkers, problem solvers, confident, responsible and productive citizens, students who are adaptable to changes in the world around them, and who are aware of a range of future focused career options (Resource and Technology Guide, 2016).

But the establishment of the NSC is not Jamaica's first attempt at reforming curricula at the grades 7–9 levels to emphasise TVET. Prior to the establishment of the NSC curricula, the Reform of Secondary Education (ROSE) programme curricula was implemented in 1993. The aim of this curricula was to ensure a common curriculum for students in secondary schools across the island thereby ensuring equity, quality, and productivity. Similar to the components in the NSC, R&T formed an important component that ensured Technical Vocational Education was offered to all students and all genders. This provided a base for developing human resources with technological capability (Brown, Jennings, & Tucker, 1998).

Within Jamaica, the provision of TVET is aimed at imparting occupational and educational skills that are linked to the labour market (UNESCO-UNEVOC, 2015). The development and implementation of a national TVET policy during 2015–16 serves as the driver for achieving these aims. The implementation of this policy is part of the government's thrust to mainstream TVET and to integrate TVET as part of curricula offerings across all levels of the education system. The focus as articulated in the policy seeks to mainstream TVET, such that all students, irrespective of the level or type of school they attend, have an opportunity to pursue TVET subjects as part of curricula offerings across all levels of the education system.

## **Education for Sustainable Development**

In Jamaica, ESD has gained prominence over the decades, the result of an evolving focus on environmental education, environmental education for sustainable development, and ESD in the nation – the terminology now at the forefront of the global community. Efforts to integrate ESD into education at all levels can be seen in curricula efforts including curricula developed under the Primary Education Improvement Project and ROSE, as well as the new curricula recently instituted – the NSC. Additionally, at the tertiary level, ESD has been incorporated into undergraduate and postgraduate courses at The University of the West Indies, as well as curricula in teachers' colleges. In addition to efforts such as these at the formal level, ESD is also integrated into non-formal and informal education.

At the national level, ESD supports the sustainable development goals of *Vision 2030 Jamaica*, the country's national sustainable development plan, including goals such as Goal #2 (The Jamaican society is secure, cohesive, and just) and Goal #4 (Jamaica has a healthy natural environment) (PIOJ, 2009). It also supports imperatives outlined in the country's *National Education Strategic Plan* and the *Education for All 2015 National Review Report: Jamaica*. Core values such as tolerance, respect, national pride, and love and care, are all called for by the MOEY&I (Ministry of Education, 2012).

## Methodology

To undertake our preliminary exploration of the curricula, we chose to undertake a basic qualitative content analysis to gain insight into its content. In using this approach, we had several considerations in mind. Firstly, Neuman (2000) advises that content analysis can be utilised for research problems that involve a large amount of text and for the exploration of messages in a text that are difficult to see with casual observation. Thus, we saw content analysis as a useful approach for exploring the curricula documents for the presence of ESD content and its nature. Hence we characterise our approach as qualitative content analysis. Secondly, we drew on the definition used by Hsieh and Shannon (2005), that content analysis is “a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns” (p. 1278). In this sense, content analysis aided us with ascertaining the frequency of particular ESD values, perspectives or issues.

In carrying out the content analysis we slightly modified the outline of steps shared by both Hsieh and Shannon (2005) and Schreier (2012), and thus proceeded as follows:

- Formulated the research questions to be answered.
- Selected the sample to be analysed.
- Defined the coding frames and the associated categories to be applied.
- Implemented the coding process.
- Determined trustworthiness.
- Analysed the results of the coding process.

After formulating the research questions to be answered (previously outlined), we purposively selected the following three subject areas for our exploration: (i) Business Management; (ii) Industrial Techniques; and (iii) Consumer Management. We examined all Units in each of these three subjects at the three grade levels. This does not represent all of the TVET curricula subjects, however, as this is a preliminary exploration, we took the decision to start with these three areas for our first phase and to include the other R&T subject – Agriculture- in our subsequent phase. Additionally, whilst our primary focus was on the manifest content of the curricula – the ‘physically present’ elements, we did note latent content (which cannot be objectively measured but can be discerned) (Neuendorf, 2017) as well.

In defining our coding frame and the associated categories, we drew on the ESD literature and identified specific ESD values, issues, and skills for exploration in the curricula documents. In particular, we drew heavily from the values, issues and skills outlined in the ESD Sourcebook (UNESCO, 2012). We focused on these areas as we examined the philosophy of the R&T curriculum, the learning objectives, content, learning experiences, assessment, teaching strategies, and resources outlined in the curricula documents (see Appendix One for the template used). We then coded the documents using the coding frame and categories, discussed our coding as a team, and analysed the results of the coding.

We must make several caveats at this point. Firstly, we acknowledge that the absence of content from curricula does not mean that it is not taught within a classroom. Indeed, we speak to this in our recommendations for future research as we note that this content analysis should be complemented by interviews with teachers and students and observation of what takes place in the classroom. Secondly, we also acknowledge that we did not engage in intercoder reliability for this preliminary exploration. However,

to strengthen credibility, we did engage in discussion and reflection upon our findings as a team. Finally, we wish to emphasise that our concern was not on the quality of the curricula but specifically on the ESD content within the curricula.

## Findings

### Manifestation of Education for Sustainable Development in the General Philosophy of the National Standards Curriculum

The Introduction to the NSC characterises the new curricula as “learner centred” and emphasises that “Children or learners are also given some measure of control over the learning process as they work together with others to experiment, in safe ways, with creative solutions to problems” and that “In the learner-centred environment displaying the right attitudes and developing appropriate values are emphasized as much as acquiring skills and understanding concepts” (MOEY& I, 2016, p. 2). Thus, skills such as problem-solving, collaboration, and creativity are outlined from the onset.

The NSC framework document that outlines the vision, philosophy, aims and principles of the new curricula of which R&T is a component was examined to ascertain the manifestation of ESD principles. From this analysis, themes that were explicitly reflective of ESD values, issues and skills were evident. The ESD values reflected included *respect for human life in its diversity* and *promotion of the rights of all without discrimination*. The only ESD issue reflected was *technology* while ESD skills included *oral and written communication, systemic thinking, critical thinking, the ability to use multiple perspectives to understand a person’s viewpoint, co-operation and collaboration, and the capacity to develop an aesthetic response to the environment and the arts*. These themes were reflected in the values, philosophy and aims of the NSC. One can therefore conclude that the general philosophy of the NSC was aimed at ESD integration.

### Education for Sustainable Development Issues, Values and Skills Reflected in the Technical and Vocational Education and Training Curricula

Before sharing some of our substantive findings, we should reiterate that our task in this research was to identify the ESD themes reflected in the curriculum and not to critique the layout or design of the curriculum. As researchers, however, the layout of the document posed a challenge in analysing its various components. Another observation was that the components as outlined prescribed the exact projects that teachers and students should be producing. In some instances, it was difficult to tell the difference between statements that were objectives and content or objectives, content and learning experiences. However, as a team, given our individual expertise we met and clarified our understanding then proceeded.

With specific focus on the TVET component of the NSC as reflected through the three R&T areas examined, the curriculum document revealed that five ESD values, four statements reflective of ESD issues and seven statements reflective of the development of ESD skills were primarily evident (See Table One). The documents revealed that statements reflective of the ESD issue of technology was common to all three R&T areas and references that indicated the ESD value to *promote conservation of resources* was common among all three grade levels, while statements that reflected ESD issues regarding

awareness of *solid and hazardous wastes and sewage* was common between Business Management and Industrial Techniques. Additionally, references that indicated the ESD value of *care for interdependent life* was common for both Industrial Techniques and Consumer Management while the development of the ESD skill of *the capacity to develop an aesthetic response to the environment and the arts* was common for Consumer Management and Industrial Techniques. Furthermore, though there was evidence of other generic skills such as observing, analysing, collaborating, making judgements, and researching mentioned in the general aims of the Business Management curriculum, there was no evidence of a clear focus on the development of ESD skills in this curriculum document.

Table 1  
*ESD Content Reflected in R&T Curricula*

ESD Content	R&T Area	Grade Level	Curriculum Component
<b>Values</b>			
<b>Are there references that indicate:</b>			
Respect for human life in its diversity	Consumer Management	7	Objectives
Care for interdependent life (animals, humans)	Consumer Management	7	Objectives
	Industrial Techniques	8	Learning Experience
Promote conservation of resources	Business Basics	7, 8	Objectives, Content, Learning experience, Teaching strategy, Assessment
	Industrial Techniques	8, 9	Learning experience, Teaching strategy
Promote the rights of all without discrimination	Consumer Management	7	Learning experience
Promote a culture of tolerance, nonviolence and peace	Consumer Management	7	Learning experience
<b>Issues</b>			
<b>Are there statements about/show recognition/awareness of</b>			
Technology	Business Basics	7	Objectives, Assessment, Teaching strategies
	Consumer Management	7	Learning experience
	Industrial Techniques	7	Content
Atmosphere	Business Basics	7	Content, Learning experience, Assessment, Teaching strategy
Solid and hazardous wastes and sewage	Business Basics	7, 9	Learning experiences, Assessment, Teaching strategy
	Industrial Techniques	8	Content
Protecting and promoting human health	Business Basics	7, 9	Objectives, Content, Teaching strategies, Assessment

*Sequel to Table 1 see on the next page.*

*Sequel to Table 1.*

	Industrial Techniques	8	Learning experience
	Industrial Techniques	7	Assessment, Objectives
<b>Skills</b>			
<b>Are there references to the development of</b>			
Systemic thinking	Industrial Techniques	8	Assessment
Ability to think in terms of time – to forecast, to think ahead, and to plan	Consumer Management	7	Objectives
Ability to use multiple perspectives to understand another person’s viewpoint	Industrial Techniques	8	Learning experience
Values analysis and clarification	Consumer Management	7	Learning experience
Action orientation	Industrial Techniques	8	Teaching strategy
Co-operation and collaboration	Industrial Techniques	8	Learning experience, Assessment
	Industrial Techniques	7	Learning experience, Assessment
Capacity to develop an aesthetic response to the environment and the arts	Consumer Management	7	Learning experience
	Industrial Techniques	8	Content, Assessment

There were also other ESD themes that the researchers sought to identify in the curriculum documents but there was no evidence that showcased their inclusion. The ESD issues, values, and skills integrated in the TVET curricula of the NSC as reported were therefore evidenced in the objectives, content, learning experiences, teaching strategies, and assessment. These components in any curriculum provide information on what should be achieved according to the area of focus, suggested content, how it should be taught, the suggested experiences that could facilitate the focus and suggestions on how to judge attainment of what should be achieved. Not all curriculum components of each R&T area and grade level reflected ESD themes, but the ESD value to *promote conservation of resources* and the ESD issue that showed awareness and recognition of *technology* and *promoting and protecting human health* were reflected in five of the curriculum components of the Business Management curriculum. Additionally, though to varying levels in each R&T curriculum, ESD content was most frequently evident in the learning experience component of the curriculum documents.

As reflected in each Unit of the R&T areas across the three grade levels, there were three instances where references of ESD values were reflected in the objectives, and five instances in the learning experiences. Regarding ESD issues in the curriculum components, there were four instances where learning experience and teaching strategies showed awareness or recognition of such issues while there were five instances where ESD issues were evident in the suggested assessment. It was observed that regarding ESD skills development, these were evident in one instance in the component of objective, content, and teaching strategy, four instances in the assessment and five instances in the learning experience. Table Two offers specific examples of the ESD values, issues, and skills identified in Industrial Techniques as an illustration.

Table 2  
*Examples of ESD Content Reflected in Industrial Techniques*

ESD Content	Comments		
	In what ways are these included in the objectives, content, learning experiences, assessment, teaching strategies, resources (Include the evidence using the wording from the curriculum guide)		
	Content	Learning Experience	Assessment
<b>Values:</b> Are there references that indicate			
Care for inter-dependent life (animals, humans)		In learning the project students will learn: Environmental considerations relating to the selection and use of common physical resources	
<b>Issues:</b> Are there statements about			
Protecting and promoting human health	Waste Handling and Management <ul style="list-style-type: none"> <li>• Disposal</li> <li>• Recycling</li> <li>• Health safety and the environment</li> </ul>		Evaluating students' competence in the: practice of health, safety and environmental protection habits
<b>Skills:</b> Are there references to the development of			
Capacity to develop an aesthetic response to the environment and the arts	Decorating and Finishes <ul style="list-style-type: none"> <li>• Use of lines and symmetry</li> <li>• Form and Function</li> <li>• Preparation of surfaces and materials</li> <li>• Application and procedures</li> <li>• Colour and lighting</li> <li>• Aesthetics appreciation</li> </ul>	Apply the most suitable/cost effective finishing application to the assembled project to add aesthetic value to the project	Portfolio gives evidence of agreed criteria for: <ul style="list-style-type: none"> <li>• Finishing and decoration</li> <li>• Evaluating, critiquing and modifying work individually or in peer groups</li> <li>• Finishing given tasks to approved standards</li> </ul>

### Discussion

The challenge posed by the document regarding the structure and layout of its components raises questions regarding teachers' own understanding of the document. Fullan (2007) notes that the difficulty with which implementers perceive a change can affect its successful implementation. Hence, the level of difficulty experienced in understanding the layout of the curricula documents could affect teachers' interpretation of what and how they are expected to teach and assess. Furthermore, the challenge experienced regarding the structuring of the components of the three curricula suggests disconnect between the philosophy that underpinned the curriculum and the prescriptive nature

articulated as the components were presented. Given the philosophy and constructivist nature of the NSC, a prescriptive curriculum that states what projects students and teachers should emphasise deprives teachers and students of their imaginative and creative manipulation of resources in problem-solving. In Jamaica, school and community contexts are extremely diverse hence allowing teachers to derive their context specific projects based on their home and community life becomes more realistic and align better with the philosophy of the NSC.

The curriculum designers must be applauded for attempts at ESD integration. However, the integration of ESD values, issues and skills lacked consistency across R&T areas and components for most of the ESD content explored. A lack of consistency suggests that there was lack of alignment between curriculum components and would require a teacher who is ESD conscious to ensure such. Curriculum components need to be aligned so that they reinforce each other (UNESCO, 2017). While we recognise that appropriately designed curricula is needed to help teachers emphasise the development of these ideals, this finding underscores the need for adequate training of teachers in how to infuse ESD principles especially where curriculum documents are lacking. Having an adequately trained teaching staff would ensure that where curriculum documents fail to provide guidance on the integration of ESD, the teacher's own ESD consciousness would propel him/her to integrate ESD principles.

The fact that the ESD value of *care for interdependent life* was common for both Industrial Techniques and Consumer Management and the ESD skill focussing on the development of the *capacity to develop an aesthetic response to the environment and the arts* was common for Consumer Management and Industrial Techniques suggests that there was reinforcement for achieving this theme and, as a result, should be more easily achieved. Additionally, the focus across three grade levels on raising student's awareness and recognition about *promoting conservation of resources, technology, solid and hazardous wastes and sewage*, and *protecting and promoting human health* suggest repetition in helping students to retain learning regarding these themes and building ESD competencies from one level to the next.

Recognising that TVET is largely about development and technology is critical to development and operating in the 21<sup>st</sup> century; all curriculum areas included students using and learning about technology. This is a positive for the R&T curricula since one of the challenges facing TVET is the 'greening' of economies (Maclean, Jagannathan and Sarvi, 2013). Additionally, raising *awareness about solid and hazardous wastes and sewage* in the areas of Industrial Techniques and Business Management suggest that the curriculum developers recognised the link between business development and the environment. This should therefore help students to be more environmentally conscious as they use and manipulate resources.

### **Missing Education for Sustainable Development Content from the Resource and Technology Areas**

Given UNESCO's (2012) charge that ESD and TVET are critical to creating active and ecologically responsible citizens, workers and consumers, we believe that there is need for the R&T curricula to integrate additional ESD principles. This is critical given Jamaica's socio-economic challenges and the power that resides in the curriculum to influence individual's consciousness. If TVET is to provide the opportunity for more

choices for citizens, improve socio-economic status and empower individuals who would otherwise be marginalised (Maclean, 2005), then a re-conceptualisation of the R&T curricula is needed. Additionally, given the increased levels of crime and violence within Jamaica, TVET provides an opportunity to raise critical consciousness (Chisolm, 2009). To create social cohesion within Jamaica and reduce inequality in all its forms, the R&T curricula components need to emphasise ESD principles such as respect for human life in its diversity, support for participation, justice, peace and sustainability, highlight poverty as a social, ethical, and environmental imperative, promotion of a culture of tolerance, non-violence and peace, land use, indigenous people, climate change and action orientation to name a few.

In creating the instrument to analyse the curricula documents we took a holistic view to education. We believe a holistic view is needed in reshaping the curricula so that students are not only focussing on content unique to each R&T area but there is emphasis on the development of competencies that cut across all R&T areas. This was the charge given to countries as outlined in Chapter 36 of *Agenda 21*. We believe that this is the only way in which TVET will result in the benefits for families and society.

### Conclusion

The aim of this research was to explore the ways in which ESD was infused in the TVET curricula of the NSC in Jamaica. The R&T component of the NSC represents TVET at the lower secondary levels of the education system in Jamaica. Our analysis of three of the R&T components revealed: that ESD themes are integrated in the general philosophy of the curricula, are integrated in various components of the R&T curricula subjects, the integration of ESD values, issues and skills lacked consistency across R&T areas and components, the curriculum lacked alignment among the components (objectives, content, learning experience, assessment, teaching strategies) that reflected ESD themes, and there is need for integration of more ESD themes in the R&T curricula to ensure that TVET and ESD yield the relevant benefits. Though we recognise that the field of curriculum is a site for contestation and is therefore open to one's interpretation, we believe that this preliminary analysis is an opportunity for dialogue, practice and policy to intertwine thereby leading the way for curriculum change. We believe that TVET represents a unifying force for reducing subject matter boundaries and awakening the critical consciousness of learners towards sustainable development. However, for this to occur the R&T curriculum must be re-oriented towards the deliberate inclusion of additional ESD themes.

### Recommendations for Future Research

Building on the findings of this research, there needs to be a second phase of content analysis that focuses on Agriculture as the other R&T subject area in the lower secondary curricula. This is in order to provide curriculum developers and teachers, as well as academics in the area, with a balanced overview of ESD in all R&T areas. Additionally, as stated previously, curricula content alone is not an indication of the development of ESD knowledge, skills and action orientations. What is actually taught in the classroom and the methodology utilised to teach is also important and should be an avenue for inquiry as follow-up to this study. Thus, observations and interviews should be incorporated into future research in this area.

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Appendix One  
Content Analysis Coding Frame and Template

ESD Themes	Yes	No	Comments					
			Objectives	Content	Learning Experiences	Assessment	Teaching Strategies	Resources
<p style="text-align: center;"><b>Values</b></p> <p style="text-align: center;"><b>Are there references that indicate:</b></p>								
			Respect for earth					
			Respect for human life in its diversity					
			Care for interdependent life (animals, humans)					
			Support for participation, justice, peace and sustainability					
			Promote conservation of resources					
			Highlight poverty as a social, ethical and environmental imperative					
			Promote gender equality and equity					
			Promote the rights of all without discrimination					
			Promote a culture of tolerance, nonviolence and peace					
<p style="text-align: center;"><b>Issues</b></p> <p style="text-align: center;"><b>Are there statements about/show recognition/awareness of</b></p>								
			Agriculture					
			Technology					
			Atmosphere					
			Biodiversity					
			Changing consumption patterns					
			Climate Change					
			Deforestation					
			Fresh water					

*Sequel to Appendix One see on the next page.*

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Desertification and drought

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Gender equity

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Urbanisation

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Indigenous people

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Land use

---

Solid and hazardous wastes and sewage

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Oceans

---

Poverty

---

Protecting and promoting human health

---

Population growth

---

**Skills**

---

**Are there references to the development of**

---

Oral and written Communication

---

Systemic thinking

---

Ability to think in terms of time – to forecast, to think ahead, and to plan

---

Critical thinking

---

Ability to use multiple perspectives to understand another person's viewpoint

---

Values analysis and clarification

---

Action orientation

---

Co-operation and collaboration

---

Capacity to develop an aesthetic response to the environment and the arts

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# Embracing the Culture of Resilience and Remembrance in Teaching Contested Historical Narratives

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## Abstract

The article focuses on a discourse of resilience and remembering and its interconnectedness in teaching contested historical narratives. History mainly consists of events, remembrance, narratives, rituals, discourses, and stereotypes which can facilitate or prevent resilience. Since such purposes are part of religious and values education, a multidimensional approach is needed, which combines historical, psychological, religious, sociological, educational and literary aspects in a kind of “grammar of remembrance”, in order to motivate and facilitate autonomous and supervised research with discussions and sharing of experiences in different projects. The aim of this conceptual study is to facilitate interdisciplinary research and educational projects concerning memory cultures and conflict management.

*Keywords:* resilience, remembrance, culture of peace, transdisciplinary discourse, contested narratives.

## Introduction

Memory has been studied within many disciplines: psychology, neuroscience, history, political science, literature, to name a few. Films, museums, and commemorations represent cultural forms of remembrance and exercise different forms of epistemological power. Thus, memory studies involve a new transdisciplinary approach. Because remembrance is also a political term, particularly in transitional societies, remembrance learning involves educational and ethical engagement with the past in terms of civic society. It entails working through knowledge, memories and transformational learning. Because remembrance is often linked with reconciliation and healing, much attention is paid to violence and destruction, emphasizing the phenomenon of forgiveness. Derrida and Ricœur focus

on a notion of forgiveness by linking this term with a discourse of forgetting. Forgiving does not mean simply forgetting the past, but staying aware of past sufferings.

### **Rationale of the Study**

The relationship between remembrance and resilience is mainly influenced by trauma therapy (Welsh, 2014) and is particularly exemplified by memorials, such as the commemorations for the victims of both World Wars and of violence since 1945 (particularly of 9/11 '2001) /[www.nps.gov/parkhistory/resedu/savage.htm](http://www.nps.gov/parkhistory/resedu/savage.htm))

This relationship, however, also concerns general commemorating and memory cultures, and becomes particularly crucial in situations, where different memory cultures are involved. Thus, it reminds us of the complex and interactive character of both remembrance and resilience. Because remembrance combines the individual, social and collective or cultural dimension of memories, it facilitates the processes of resilience for individuals, groups and communities (Assmann & Hölscher, 1988; Assmann, 2006).

Because resilience also combines individual and systemic/social aspects, it is influenced by both individual experiences and social impacts (Lazarus, 1966). In order to draw benefit from these interactions between remembrance and resilience, reconciliation becomes a core link between both parts.

As reconciliation with oneself, it facilitates resilience in coping with our own experiences of guilt or trauma, with our own stereotypes and belief systems; as reconciliation of different groups or communities with each other, it facilitates resilience in coping with collective stereotypes, crimes or traumata. Therefore, remembrance, reconciliation, and resilience become core issues of education, particularly for values and religious oriented education.

By remembering one's own experiences, by exploring its current meaning and by imagining future developments and challenges, people gain a new, multidimensional and holistic understanding during their process of lifelong learning. This integrative approach acknowledges the transformative theories of remembering, which emphasize the intuitive, mythical and emotional sense of human experiences, the concreteness of the here-and-now, and the (individual and collective) unconscious as the primary source of creativity, vitality, and wisdom. Because the narrative is a bridge to the other person, memory has a positive contribution to make in communities seeking reconciliation. (Franzenburg, 2012a; 2012b; 2013d; 2015; 2016c).

'Mourning' the past and 'working through' what has happened there, must be brought together in the fight for the 'acceptability' of memories. Thus, forgiveness begins with a willingness to 'share mourning' (Ricoeur, 2004). In this context, empathy becomes a core attitude of remembrance sharing, particularly during discussions with people who experienced cruelties in the family; thus, empathy facilitates awareness of emotions, and allows voluntary participation (Boschki et al., 2015; Dewes, 2008; Erll, 2005; Halbwachs, 1989). Thus, the dialogue between memory and forgetting becomes a source of sustainable healing and sustained forgiveness concerning individual and collective memory, and even history written by historians, because narrative memory is never neutral, but told from a certain perspective. Therefore, narrative imagination can assist the 'universalization' of remembering and, thus, facilitate sustainability by sharing memories, both individual and collective, in order to fulfill the 'moral duty' to remember as a means of paying the debt owed to all victims. These considerations underline that,

for developing a sustainable general education and a peace education pedagogy and worldview, narrative imagination is crucial. (Salite, et. al, 2016)

### **Contribution of Educational Institutions in Building a Culture of Peace**

The promotion of peace is included in the United Nations (UN) Agenda 2030 for Sustainable Development as one of the 17 Sustainable Development Goals that places a responsibility on every country to sustain peace, security and prosperity worldwide. Sustainable Development Goal 16 places its emphases on promoting peaceful and inclusive societies for sustainable development.

The use of textbooks within educational institutions can result in the reproduction of conflicts. Narratives reflected in the textbooks tell the story of a particular group of people and often serve for justifying a group's violent actions. More often, the textbooks present the enemy group as the one to blame and as the object of dehumanization and demonization of the Other. Schools need to foster a narrative of transformation in order to reimagine the past and to create a sustainable future. This involves dehumanizing the Other and acknowledging one group's complicity in the historical discourse (Cobb, 2006). Pupils need to be equipped with the tools to 'deconstruct' the text in order to prevent reproducing hegemonic historical narratives. This critical discourse involves transforming hegemonic narratives which have served to legitimize the perpetrator.

The core of peace education is to allow a space for engaging with narratives of trauma, and conflict in rebuilding relationships and continuing the dialogue at a deeper level. Duckworth (2015) argues that classrooms can become a safe place for telling a new story, by replacing the narratives of violence with new narratives of shared humanity

### **Developing Narratives of Remembrance and Reconciliation**

The discourse of remembering is necessary not only for the sake of remembering but as a means of learning from the past in order not to repeat past mistakes and to understand our indebtedness to the past. As Gordon (2015) discusses, the discourse of forgetting is also useful for opening up individuals towards creating something entirely new, and this enables one to act ethically towards others. Forgetting goes in line with the discourse of forgiving that can help to cope with historical traumas. An ethic of remembrance needs to empower us not only to understand the sources of suffering but to undertake a responsibility for liberation and flourishing. This is a uniquely human capacity that leads to more constructive thoughts. This involves a shift in attention from painful memories to new alternatives for actions accompanied with energies of the present and the future.

Historical remembrance will allow us to study the sources of resilience of nations and their capacity to focus on life sustaining resources in healthy and meaningful ways in times of oppression or crisis. Critical engagement with the history reveals the community's resilience in preserving/maintaining cultural identity, language, spirituality, traditional activities and collective agency. Here, storytelling can be used to reveal nations' value system, and strategies of resilience (Denham, 2008; Kimayer et al., 2012). This will allow us to foster true transformation of narrative.

In order to invite individuals and groups to develop resilience by sharing their own and common experiences and different interpretations of them, we invite them to find

ways of reconciliation with one's own or the collective past and with present conflicts. These experiences have to be "objectivized" by proposing historical, official and Ego-documents; so by evaluating and sharing them, stereotypes and belief systems become more explicit and thus can be challenged and corrected. By proposing particular questions and suggestions for different ages (young and older adults) and contexts (religious and secular), individuals and groups in parishes, educational institutions or private contexts become aware of the religious and values aspect of historical and current events and situations, and become able to transfer the material and methods into their particular situations and frameworks.

As the following examples show, a multidimensional approach to research and education is helpful for sustainable peace education, memory learning and reconciliation:

- Concerning the historical approach, historical events are characterized by discourses, which have to be analyzed in a multi-dimensional way (individual and collective, different types of documents).
- Concerning the religious approach, a multi-dimensional analysis of texts should be applied, combining intrinsic and extrinsic, confessional and non-confessional aspects.
- Concerning the psychological and sociological approach, individual and collective aspects are combined, and so are biographical and systemic elements.

### **Multiple Ways of Engaging Youth in the Culture of Remembrance**

If we want to engage young people in communication about the tragedies of the past, we will have to analyze the images and the 'visual' world and the 'information society' in that time and try to connect it with the one in which our youth now live. There is a growing concern about society's moral and spiritual condition, which can be seen in various trends in young people's behavior: the rise in pointless violence; increasing dishonesty; the growing disrespect for parents, teachers, and other authority figures; an increase in bigotry and crimes related to racism and xenophobia; the deterioration of language; a rise in instances of self-destructive behavior; and a decline in personal and civic responsibility: all of which might be included under the term delinquency. Delinquency associated with the world of criminology means an attitude of someone who has destroyed links and connections. These are clear signs of the Anthropocene (Fedosejeva, et al, 2018; Salite, 2009).

The concept of linking is an expression of concern for the development of positive orientations towards the present and the past: it offers a point of reference for citizenship and remembrance education. Linking with the ecosystem is essentially an anthropological and even a religious concept. Etymologically, 're- ligation' (re- liare) means 'linking again', just as 'de- linqency' means 'the lack of being linked'. The basic sense of connectedness can be seen as a cornerstone that prevents criminal behavior or action that damages people and things. In early childhood and in primary and secondary education children are helped to develop this attitude of linking with themselves, with others, with the material world, with society and with the ultimate unity of the eco-system.

One of the optional courses in the teacher training college in Torhout is based on this insight to establish all kind of links. Learn about the past in the present for the future. Remembrance education in Flanders, Belgium involves the cognitive dimension 'learning to know', the affective dimension 'learning to be' and the pragmatic dimension 'learning

to do', to which we may add a fourth dimension: the global dimension or learning to live together (UNESCO, 1989).

In Remembrance education we want to cooperate with families, local authorities, elderly houses, museums, researchers, and peers by doing outdoor activities. These activities are intellectual as well as emotional experiences, and it accelerates when an individual is fully immersed in a different way of living, as happens when living in another country. Exchanges from past to present.

Exchanges can lead to a new vision of the world, a new way of being; what the ancient Greeks called a *metanoia*, a conversion of the mind. In addition, the learning opportunities presented by an intercultural experience do not only result in a greater awareness of one's own culture, but also of the cultures of others and the links that may exist between the partners.

Intercultural exchanges with peers about the victims from historical tragedies (e.g. deportations, labor camps) also encourage the students to develop broader loyalties beyond their home and nation enabling them to acquire a sense of belonging to larger communities. Remembrance education includes elements of civil and political education. The skills that pupils may acquire through an intercultural experience can be grouped under areas of growth and change. First there are the personal values and skills. They think more creatively and critically. They deepen a concern for and sensitivity to others, to value human diversity, to increase their adaptability to changing social circumstances. They communicate with others using their ways of expression. They increase their knowledge of the host country and its culture; they increase sensitivity to subtle features of the host's culture, become aware of worldwide linkages, and deepen interest in and concern about tragedies in the recent past.

Everything we know about the past is extrapolated, to some extent, from our personal knowledge, and indeed our knowledge often derives from popular narratives, and all this can lead us astray. The war diaries and pictures of the 'Great War' left by eyewitnesses have to be linked with narratives based on research of archives situated in official institutes (e.g. Parliament, Museums, Ministry of Defense and local authorities). Historians have the duty to demystify stories that feed patriotism and heroism. (De Wever, 2010)

As teacher trainers we need to help trainees to become familiar with and understand a wide range of cultural practices around visual literacy. Manipulation and indoctrination by images is never far away, especially when we talk about propaganda within a historical context. With trainees we worked out occasional Remembrance projects based on commemorations (e.g. Armistice Day November 11, Liberation Day May 10,) in combination with (live) testimonies, memorials and artifacts. Doing performances in the hemisphere of the Belgian Senate, participating in reading in public the names list of the soldiers killed in action during World War I or selecting fragments of Ruta Sepetys' novel '*Between shades of gray' also in French* (Ce qu'ils n'ont pas pu nous prendre) and Dutch (Schaduwverdriet) – are important ways to express the meanings of the tragedies that we called 'battlefields, occupation or deportation'.

In relation to learning, the use of two-dimensional images and three-dimensional installations offered three major advantages. Jewish artists as Marc Chagall (born Vitesk) and Felix Nussbaum (living in Oostende and Brussels and murdered in Auschwitz) produced masterpieces that are eye-openers and open for several interpretations. Before doing this we need to promote an objective observation before interpretation. We always

wish to introduce the two key questions: what do you see and what do you see in? Most of the time, we combine the analyses with other disciplines within arts (e.g. music, film). Masterpieces are highly memorable. Like songs, pictures and sculptures, they stick in the head. They are highly motivating, particularly so for children and young adult learners.

Images in their many forms constitute a powerful subculture, and it would be unwise to ignore this flexible and attractive resource. Indeed, history, civic education and remembrance education have always made good use of images. Anything that can be done with a text can be done with a picture'. Using 2-D and 3-D data gets an audience on the same wavelength and creates common goals, common targets and common terminology, and makes formal modelling much easier, faster and more accurate. Visualization and materialization could be ways to explore the cultural and historical diversity. Supported by personal stories and biographies teachers and pupils explore narratives and collected objects within different environments. The benefit of this exploration is the discovery of the heritage of each participant. During this kind of session, linguistic diversity will be in the picture too. Empowering objects with words, stories and comments allows the participants an authentic way to name their ways of resilience.

During outdoor workshops about decoding war monuments and analyzing photos in war museums (e.g. Flanders Fields Museum Ieper, Memorial Passendaele, 1917) participants are stimulated to be aware of activities of resilience of the passing of time, remembering important moments of resistance by civilians in the past and anticipating peace activities in the future (Verkest, 1993)

An audio-visual testimony is a narrative genre but cannot be reduced to text alone. It is a complex narrative form encompassing many features. The face, eyes, voice, intonation, emotion, and body language of the subject inform its narrative complexity, as well as pauses, silence, and staring blankly at the floor or through an invisible window. All form a part of the visual narrative, which the text itself cannot convey. Those physical features of the narrative are as much part of the historical heritage to be preserved as the text itself. The relationship between data (the video testimony itself) and the metadata (the marking and mapping of the data and the way to identify content) has many interlocking layers. It is a dynamic and fluid matrix of physical data (video), narrative (words), supra-narrative (emotions, tone, context, face, gesture, and so forth), metadata (content identifiers), context (place, people, reason to view), interpretation (meaning for the audience, and secondary narratives (retelling).

All of the affective gestures happened, but do not appear as characteristics in the metadata. We used the term 'supra-narrative'. It contains those aspects of the narrative that are beyond the text itself. Put another way, in video testimony, supra-narratives are all of those aspects of the testimony except the spoken words and their overarching meaning (the meta-narrative). Supra-narratives include concepts of time, space, chronology, themes, and meaning; spiritual, moral, or ethical compass; historical framing, familial and relational contexts, implied meaning, commentary, poetics, and unspoken elements of the interview, such as physical silence and memories not revealed in testimony but that can nevertheless be discerned from the testimony. The silence tells the viewer a great deal about the victim herself/himself, the emotions in that moment, and the meaning of that episode to past life. There is no metadata to tag that silence. It is quite plausible that a future metadata structure would allow for the keyword 'reflective silence' or 'silence related to loss'.

Families of survivors were neither interested in, nor cognizant of, the testimony as either data or metadata. What they heard were the words of the family member who survived; they felt the emotions and interacted with each other about the meaning of what they had just seen and heard. They have retold the experience to many friends and family and distributed copies. That experience was only made possible by the power of retrieval – using metadata to find the correct data, which, when retrieved, would have meaning to the viewer.

### **Cemeteries as Sustainable Commemoration and Reconciliation**

A particular political example of resilience and reconciliation by remembering concerning the ambivalent relationship between Germans and Latvians, is the German Riga Committee, founded in May 2000. As an association of 55 German towns and municipalities, it aims to keep alive the memory of the Jewish victims of National Socialism for the generations to come, particularly of the more than 25 000 Jewish citizens deported to Riga in 1941/1942 from their home cities; most of them murdered in the woods of Bikernieki. The initiative combines the aspects of commemoration, reconciliation and sustainability by educational activities, when eyewitnesses and young students from different countries come together in regular meetings, symposia, international work-camps and joint commemorative journeys. The focus of the Riga committees' work is to trace the multiple narratives as well as historical complexity in order to contribute to international understanding in today's Europe, but also to build a worthy war cemetery and memorial site for the victims, such as the memorial in the Bikernieki wood. Such silent memory facilitates close relations as well as a lively exchange of memories between Riga and those German cities where the deportations started ([www.volksbund.de/partner/deutsches-riga-komitee/deutsches-riga-komitee-englisch.html](http://www.volksbund.de/partner/deutsches-riga-komitee/deutsches-riga-komitee-englisch.html)).

### **A “Grammar of Remembrance”: A Key for Sustainable Reconciliation**

In a narration of the Chassidim the following story is told: When Baal-Schem had to do something difficult, any confidential helpful work for the creatures, he went to a certain place in the wood, lighted a fire and spoke his prayer, submerged in mystic meditations. When one generation later, the Maggid of Meseritz had the same task, he went to that place in the wood, and said: “We cannot make the fire any more, but the prayers we can speak” – and everything followed his will. Again, one generation later, Rabbi Mosche performed the same ceremony: He went to the wood, and said: “We can light no more that fire, and we also do not know the confidential meditations any more which animate the prayer; but we know the place in the wood where all this belongs, and this must be enough” – and it was enough. But again, when one generation later Rabbi Israel of Rischin had to do that action, he sat down in his castle on his golden chair and said: “We can make no fire, we can speak no prayers, we also do not know the place anymore, but we can tell the story of it.” And only his story had the same effect as did the actions of three generations before (Sholem, 1957).

The model behind this legend facilitates a particular kind of a transformation grammar (Chomsky, 1957) concerning contents, kinds, organisation, and methods of remembrance as its “syntax”: categories, which generates meaning and coherence. A

“grammar of remembrance”, therefore, evaluates narratives, discourses, symbols, rituals, and similar issues as a kind of “mental memory-lexicon” in order to find and (re)construct models, strategies and programs as a surface structure, which can facilitate analogue research and generate coping strategies.

The grammar is based on the conviction that remembrance can be interpreted as a particular kind of informal learning, which does not depend on any examination or curriculum, but on the challenge to communicate and share memories with other people, who do not have the same experiences; it is, therefore, influenced by the particular context, and by the particular inherent purposes of remembering (Franzenburg, 2016b).

In 2015, researchers from the universities of Daugavpils and Muenster asked (by questionnaires) 144 students from Germany, Latvia, and Poland about their perspective on remembrance (Franzenburg, 2015). The participants underlined that people, who are interested in the past – either concerning particular historical events or family events – prefer human experiences instead of neutral facts: Therefore, the young students suggest inviting eye-witnesses into schools, and to make excursions to remembrance places (Franzenburg, 2015). In an analogue way, people of advanced age, remembering their childhood and school life emphasize the value of persons and situations, which influenced their later life in a positive or negative way as their individual and cultural identity (Franzenburg, 2012b; 2016d). These results exemplify that – as a crucial part of a “syntax” of remembrance – cultural identity depends on memory, fantasy, narrative and myth, which particularly is demonstrated by migrants from Latvia and other countries, particularly after 1945. By focusing on their mother tongue and motherland, illustrated by songs, symbols, sermons and narratives, they gained the power to cope with experiences of minority-existence in their German or oversea exile and diaspora. Confronted with the challenge of coping with stereotypes, cultural identity, assimilation and political intentions, they found their own way of acculturation in foreign circumstances (Franzenburg, 2012; 2013). Thus, their example underlines the political responsibility of memory (Assmann, 2011) as a third element of the “syntax” of remembrance., because it concerns different aspects of remembrance: communicative and cultural memory (Assmann, 2008) and their social (Halbwachs, 1989) and cultural conditions and circumstances (Erll, 2005).

Therefore, memory-learning becomes an interdisciplinary approach, because it combines different approaches and experiences, it, furthermore, helps to draw benefit from foreign and former experiences and mistakes as the students answered during the study. For them, memories as a part of global history and part of everyday life of any person, help to understand one’s own (national) roots and attitudes and foster moral attitudes. Other than Latvian and polish students Germans also in this context focus on the individual responsibility according to the intercultural and inter religious challenges and according to the German (Nazi) past. Latvian students interpret past experiences and their remembrance as part of their own cultural identity and see, therefore, memory as an enrichment of their cultural life, especially when remembering the rich culture of their national past; similar to German and Polish students they focus not only on school, but on the family and society for a better historical understanding by narrations from older people, not only data and facts. Polish students agree with the suggestion to learn more about the past, not only in lessons, but in life. Similar observations can be made according to the responsibility towards following generations: Germans focus on the

responsibility of parents for the education of future leaders. By reminding individuals of the traumata of War, they make them aware of the dangerous roots of conflicts and avoid repetitions of faults and facilitate a tolerant attitude by explaining the backgrounds of imperialism and nationalism in a narrative way and by facilitating empathy for suffering and for other cultures.

First of all, parents and grandparents should be motivated to search for traces of roots and to appreciate one's life, attitude, national roots and convictions as a contribution to intercultural dialogue and global peace. Latvians appreciate the historical knowledge as a part of their cultural identity, especially to understand the backgrounds of and reasons for exile, deportation, War, struggles for independence and similar past national events. In a similar way, Polish students also recognize national history as a part of human history, especially concerning the aspect of war and national independence; they agree that this is a task and a challenge for intergenerational learning. Therefore, they share the suggestion that this is the best way to prevent future wars and to facilitate a patriotic attitude within the young generation. While all students in the three countries underline that remembrance is useful for human morality, they use different approaches: from critical individualism (Germany), from culture- (Latvia) or religious oriented patriotism (Poland). All together agreed that all people share the democratic right and task to remember; therefore, narrations are crucial, before the remembrance will die with the narrator: The participants agree that 1989/90 was a symbol for the liberating power of remembrance and historical knowledge (Franzenburg, 2015).

These results underline that a main aspect of a "syntax" or grammar of remembrance are motivating models of reconciliation. In this context – as exemplified by the Chassidic tradition – the Jewish model of remembrance and reconciliation is of particular influence and value, because it recalls victims as well as blessings (Exodus, Shoa), and this underlines remembering as a moral duty. Thanks to memory and the narratives that preserve the memory of the horrible, the horrible is prevented from being leveled off by explanation, or from being abused by the excesses of certain 'commemorations and rituals, festivals and myths' that attempt to fix memories in a 'reverential relationship' to the past, while ethical memory is restored with the good use of commemorative acts, over and above the abuses of ritualized commemoration (Duffy, 2009). As a work of 'mourning', memory becomes a source of reconciliation and an opportunity for new possibilities in the future. 'Mourning' the past and 'working through' what has happened there, must be brought together in the fight for the 'acceptability' of memories. In this context, empathy becomes a core attitude of remembrance sharing, particularly during discussions with people, who experienced cruelties in the family; thus, empathy facilitates awareness of emotions, and allows voluntary participation (Boschki et al., 2015). Particularly common historical events, such as the end of World War I, which signified for Germans and Russians the end of the era of Monarchy, and for Latvia, Poland and other Eastern European Countries, the beginning of a new era as independent states; thus, considering such ambivalences facilitates historical consciousness (Franzenburg, 2018a; 2018b).

Thus, by keeping individual and collective memories and heritage alive by celebrating particular remembrance days, places, rituals and narrations, also reconciliation between former enemies or opponents, and resilience by remembering and reactivating coping strategies become sustainable.

### Conclusion

Concerning the development of a common “grammar of remembrance” by sharing experiences, and by further research, the answers of the mentioned (and other) studies suggest considering the value of models as categories for evaluating and constructing memory cultures of individuals, groups and communities.

The considerations and studies, which are presented in this article from a German, Belgique and Latvian perspective, facilitate a broader and deeper historical research by asking for the belief- and value systems of individuals, groups and nations behind historical events. It also facilitates a contextual research on religious and value oriented phenomena, such as rituals, narratives, transcendent and sacral experiences and intercultural discourses, by explaining backgrounds, circumstances and consequences of such experiences, which are influenced by aspects of time (past, present, future), situation (individual and collective) and place (real or fictional/mythical).

By contextualization, such experiences can become sustainable and open for purposes of research and education. Narrative transformations of the past are needed to create a more sustainable and secure future by dehumanizing the Other and acknowledging one’s own groups’ complicity in the violence. Schools, teachers, and curriculum must be a part of the peacebuilding process rather than reproducing their own narrative of the conflict. Educators, therefore, need to create opportunities for a critical dialogue around such issues as peace, justice, and reconciliation. Educational institutions need to facilitate dialogue around collective historical traumas. In deconstructing hegemonic historical narratives, students need to be encouraged to build a new story of shared humanity and where all parties have rights. The main aim of pedagogy of remembering and resilience is to develop students as more competent thinkers who are able to identify continuity and change, analyze the causes and consequences of historical events and understand “ethical dimensions of history” (Gordon, 2015, p. 491). Students need to become historically mindful citizens who can analyze complex historical events and respond to political and moral injustices. They need to know how their identities have been shaped by their own histories. Historical narratives need to be learned and understood and evaluated systematically in their “syntax”, so that people do not repeat mistakes of other generations, but also in order to heal from trauma.

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# International Exchange of Ideas in Student-Interactive Videoconferences – Sustainable Communication for Developing Intercultural Understanding with Student Teachers

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## Abstract

International communication with different digital tools is now established both at universities and in other contexts worldwide. It is therefore relevant to describe how one of these tools is used in higher education. In the present study the focus is on seminars carried out in student-interactive video-conferences on didactic and pedagogical issues with student teachers. The participants were international and Swedish student teachers at the Department of Education at a Swedish university and at two different campuses. The results are based on analyses of the students' written reports completed after the seminars and show that the interactive video-conference is useful to establish contacts between students in different places and to develop intercultural understanding of school-related matters. The video-conference is thus a way to work with internationalization in a sustainable way in teacher education, giving opportunities for the exchange of ideas and experiences both at personal and professional levels without mobility.

*Keywords:* sustainable communication, teacher students, interactive video-conferences, internationalization.

## Background

The world has become easy to reach both in mobility and with the help of modern technology. This leads to more encounters between citizens of the world and thereby more learning and shared experiences at a global level. In this way more international perspectives can be included in the development of services, products, teaching and learning and research. At the same time ever increasing travel for meetings is not desirable for reasons associated with sustainable development. This is true both for business as well as academic contexts.

The exchange of ideas at an international level thus becomes more and more frequent due to the development of modern technology. This leads to the fact that many tools are available and easy to use in order to facilitate 'virtual' meetings between people from different places in the world. The strong and established position of social media

for communication facilitates international study- and work-related communication. Other means such as Skype make it feasible to meet in new contexts and new environments and exchange ideas. Communication has in this way become free from borders and limits, and a natural part of everyday life which puts new demands on knowledge of these means of efficient communication for international understanding.

At universities, working with internationalisation is an instrument to achieve high quality both in didactic and research issues. Research demands cooperation in international environments, and frequent contacts with fellow researchers in many places in the world and the use of sources and data for investigations from other contexts and written in other languages are and have been characteristics of high quality. These necessary contacts require means for efficient international communication.

Nevertheless, mobility has to be limited in order to care about the environment. It is necessary to use alternative and sustainable ways of meeting with persons others than travelling to each other. With this in mind, it is essential to introduce students to efficient and sustainable ways of communicating internationally as early as possible in their education so that they easily adopt these ways of communicating in their careers later on.

Universities have a special responsibility to spread the ideas about sustainable communication and to apply them when feasible. Partnerships between universities which comprise both research and education are frequent and efficient communication facilitates the development and spreading of ideas in both these contexts. This can be particularly important when it comes to university colleges or special campuses of universities which do not have access to meetings with visiting scholars and researchers and therefore need to adhere to other ways than mobility for the development of high quality in all respects.

### **International Cooperation at Universities**

Internationalisation is given more emphasis in higher education and is now central on the agenda for universities in Europe that strive for high quality in their activities. This tendency has also increased over the past 25 years (de Wit, 2010). At the same time and over the last decade, ethnic and cultural diversity has dramatically increased in student enrolments (Tawagi & Mak, 2014). This leads to new demands on educational institutions at all levels to work on making students interculturally aware and prepared for the challenges in education and working life.

In the same way that continuous professional development can have an impact on teachers' work in the classroom (Mohammadi & Moradi, 2017), the sharing of ideas between student teachers from different cultural backgrounds may influence their future ways of handling the didactic dilemmas in their future everyday work. The theory of transformative learning is relevant to include in this discussion since it is said to occur when there is a change in meaning perspectives that happen when students cross cultural borders (Webb, 2015). The outcome may be that the students experience personal and particular learning outcomes, especially when it comes to living abroad for a longer period of time. This was the case in a study on twelve international students' learning experiences at four universities in Portugal. Narratives from their two-year stay which were collected showed the significance of their out-of-classroom experiences in this partnership cooperation with Portuguese universities (Nada, Montgomery & Araújo,

2018). International partnerships between universities are essential to prepare students for efficient learning in these new circumstances and contexts both when it is a matter of actual personal mobility or cooperation with the help of ICT (Mutabazi & Sundh, 2017).

Students learn together and the sociocultural theory can be used as a background perspective which highlights the fact that mental functioning is a mediated process which is organized by cultural artefacts, activities and concepts (Lantolf & Thorne, 2007). It then becomes essential to focus on communication between students in their learning to enable them to learn about phenomena which cannot be reached with other means. According to the Vygotskian view, language serves “as a buffer between the person and the environment” and acts to “mediate the relationship between the individual and the social-material world” (ibid, p. 199). It goes without saying that interpersonal communication regarding cultural differences and shared values in out-of-classroom contexts can be extremely valuable to have an impact on the understanding of the similarities and differences in national educational guidelines and school systems.

The fact that there are students with different backgrounds, learning styles and knowledge levels in higher education has become more topical in recent years (Dzelzkalēja & Sen, 2018). This fact should be considered so the diversity and complexity when organizing teaching and learning with groups of different nationalities is taken into account. Carroll (2015, p. 17) distinguishes three diversity factors to consider. Firstly, there is educational mobility with students moving to and from various learning settings. Secondly, students learn in different ways and adhere to a variation in values and beliefs regarding how their learning should be organized and carried out. Thirdly, when it comes to having a mixture of nationalities in groups, the language factor is not to be neglected. The students' (and lecturers') proficiency level in English is in many cases crucial for successful interaction and learning.

When it comes to certain programs and disciplines it is of significance to identify useful ways for how learning and development can take place. International contacts and comparisons are definitely of importance but also in-school placements are necessary in order to place the theoretical parts in a practical and applied context. Applications of theories and concepts from educational and didactic studies are frequently regarded as being very positive by student teachers. This was for instance investigated in a limited study on 12 doctoral students taking a teacher education course in Jordan where the findings advocated school-based teacher training as a part of sustainable teacher education (Alkhawaldeh, 2017).

### **Communication in Student-Interactive Video-Conferences**

The skill of communicating in the first language or in a foreign language is important for university students in general. It may be argued that this is the case particularly for teacher students since in some cases university lecturers consider that their teacher students lack some communication skills (Gallego Ortega & Fuentes, 2015). Consequently, priorities should be given in teacher education to this important aspect in order to prepare student teachers to be efficient in their communication in the future multicultural and multilingual classrooms.

Speaking and communicating in a foreign language is even more demanding than in the mother tongue with all the mastery that is needed in pronunciation, vocabulary,

structures and communication strategies. Speaking gives no time to plan or elaborate on formulations but the immediate response is required. This was expressed in a study on students' voices in videoconferencing in university language education by a Slovakian student in the following way: "There are also some disadvantages. For example fear from necessity of quick formularization and politically unsuitable comments" (Stepanek, 2018, p. 113). Speaking in student-interactive video-conferences is nevertheless one way of practising this important skill.

ICT has taken major steps into second language acquisition and intercultural learning. Various mobile technologies are useful and studies of students' experiences and habits have been carried out (see e.g. Ma, 2017). The fact that student-interactive video-conferences are used to gain intercultural insights and awareness was studied in cooperation between Swedish and Czech universities (Sundh & Denksteinova, 2015). The results show that in spite of great differences in language proficiency, the students, and in this case students basically of business administration, considered that the communication had been important for their learning about different values and views on business communication in the two countries.

The lecturer can choose a role in the student-interactive video-conference. This was investigated in a project with Czech and Swedish university business students. Seven teacher roles were identified and are discussed as a finding in this project. They are designer, manager, process facilitator, content facilitator, technologist, assessor and researcher (Denksteinova & Sundh, 2018). What decides this choice, as is the case in all didactic dilemmas and decisions depends on the group and the desired learning outcomes and is a part of the professional work of the lecturer.

### **Purpose and Research Questions**

The purpose of the present study is to present students' views on seminars carried out in student-interactive video-conferences. The video-conference provided a setting for students to meet and discuss certain issues in spite of the fact that they were in different geographical places. The research questions to be answered are the following:

How do student teachers experience seminars carried out in autonomous student-interactive video-conferences in an international context?

What issues are raised in discussions about education and learning in communication between international student teachers?

For what purposes and in what ways can seminars with student teachers in student-interactive video-conference be used for the internationalisation of their education?

### **Method and Data**

In the autumn semester of 2018, international students at the Department of Education at Uppsala University in Uppsala, Sweden were assigned to complete a task in a video-conference with Swedish students at the same department and university but placed at another campus on an island in the Baltic Sea, namely Campus Gotland of Uppsala University. The seminar was to be carried out without the guidance of the lecturer. The empirical data of the present study is students' answers and reflections after having experienced their first seminar in a student-interactive videoconference. Immediately

after the seminars, the students were asked to meet and summarize their experiences together and submit a written report of their discussion. In addition, they could also write individual reports if they preferred to do so.

The participants were on the one hand, 33 international exchange students who studied a course of education in Uppsala, and on the other hand, 20 Swedish students who studied their first semester of a primary school teacher programme at Uppsala University Campus Gotland. The international students were from Austria, El Salvador, France, Germany, Japan, the Netherlands, Serbia, South Korea, Spain, Switzerland, the United States. The students had already experienced or were going to have their school-based part in the following few weeks (cf. Alkhawaldeh, 2017).

The students met in a one-hour seminar when the international students were in Uppsala and the Swedish students were in Visby on the island of Gotland. Before the seminar both the categories of the students were given a list of suggested questions which could be used in the seminar. The task was to find out as much as possible about the interlocutor's personal experiences and ideas regarding issues such as classroom procedures, the teacher's role and values identified in the educational system. They were then to use these findings in the respective final examination paper of their different courses. (See Appendix 1 for the list of questions provided.) The role of the lecturer in these student-interactive video-conferences was designer, manager and researcher (cf. Denksteinova & Sundh, 2018).

The data comprise 19 reports with a total of 6,450 words collected. Analyses of the data were carried out to identify the themes. In what follows these themes are described with quotations from the reports for illustration. The reports were analysed with the help of a thematic analysis when key words were collected according to the five categories: (1) procedures in the student-interactive video-conferences, (2) the organization of education at schools with reference to national guidelines, (3) the actual teaching and learning in classrooms and schools, (4) the teacher education at university and (5) the teachers' working conditions. The approach was thus qualitative with the following four principles. Firstly, the approach is that the results presented are completely based on the written data retrieved. Secondly, the analyses are well-founded and only come from detailed scrutinizing of the written data. Thirdly, no presumptions or conclusions based on previous studies are to be the starting-point in the presentations. Finally, the analyses of the data were regarded as continuous processes between the actual data and the five decided categories (Denscombe 2007).

## Results

The following five categories are thus used to systematically present the results: (1) Procedures in the student-interactive video-conferences; (2) The organization of education at schools; (3) The teaching and learning at schools; (4) The teacher education at university and (5) Teachers' working conditions. The five categories are presented below with the themes and key words identified. The term *key words* is used for recurrent words that were identified in each theme in the data. In order to illustrate the content in the reports, a number of quotations are provided in each category.

Table 1  
*Procedures in the Student-Interactive Video-Conferences*

Themes	Key words
Generally	interesting exchange, practical issues highlighted, advantage to have the Swedish student's perspective on many issues
Organization	advantage with small groups
Personal	new/first experience, interesting and rewarding
Technology	no problems with technical matters, good quality
Before the conference	prepare with an article to get more knowledge beforehand

*"In conclusion it was a good experience and an interesting exchange with the students from Sweden."* (1)

*"We all found this experience helpful"* (2)

*"I think it was a good idea to get some insights from Swedish people on how they experienced their time in school and also how their education as a teacher is."* (3)

The students emphasized the positive aspects of the communication with small groups and that they learned about many new aspects regarding school and education in Sweden. The technical part was without problems but the communication could have been more prepared in advance so that the students were fully aware of the purpose.

Table 2  
*The Organization of Education at Schools*

Themes	Key words
The school day	lesson length, schedule, the size of the classes, the number of hours per day, the characteristics of an ordinary school day
The school year	summer break, the semesters
Breaks	outdoor activities and physical activity
Meals at school	free meals
Social work	moral values and social abilities at school
Transportation	free transportation to school for all, even disabled
Material at schools	free books, frequent use of ICT

*"Also we found out that one of the most important things in Swedish schools is that the students spend their time during the breaks outside. In this case the importance of physical activity is emphasized and it's considered necessary for the health and development of children. Students spend their break time outside even during the winter when the weather is rainy and very cold. Students take some warm clothes and go out to play. This fact surprised me, because in schools in my country, children spend their time during breaks inside school during the winter. This was surprising for other students too, because the students in their countries also spend break times inside, if the weather is bad."* (4)

*"It's one thing to talk about policy, but it's another to hear it from a first-hand account."* (5)

As can be seen in (4) above, the discussion could touch upon very detailed matters which then gave the students a concrete picture of the organization of the school day and the framework for education at primary schools in Sweden. Personal narratives provided information that became a useful addition to general descriptions of policies and national guidelines.

Table 3  
*The Teaching and Learning at Schools*

Themes	Key words
Curriculum and syllabus	national guidelines, core subjects, school profiles
Assessment	grading system used, national tests
Home contacts	contacts with parents, homework
Languages	foreign languages learnt, the start when learning foreign languages
External factors	the presence of the English language in society in Sweden
Working routines	children can make choices in methods and material in Sweden
Didactic issues	language teaching, the age to start and methodology with English for young learners, the emphasis on the reading skill, different approaches in teaching, group work with advantages and disadvantages
Subjects	cross-disciplinary work
Motivation	the significance for the teachers of finding interesting and useful material and approaches
Inclusion	the presence of teacher assistants
Teacher role	working on motivation and students' independence

*“Firstly, and one of the most important things in my point of view is the fact that learning English can be something “natural” for Swedish children, thanks to the importance given not only by the school but also for society.” (6)*

*“We found out that teachers in Sweden are trying to combine lessons from different subjects, and in this way they try to make the class interesting for the students and make it easier for students to build meaningful connections within learning process on a new content, and then to connect new content with previous experience and knowledge of students.” (7)*

Issues regarding the actual learning and teaching processes at schools constitute one of the dominating fields of interests in the one-hour communications. Students were much engaged in detailed didactic questions regarding the concrete procedures used in the classrooms, how teachers actually plan their work and the teacher's attitudes to the grading system, national tests and inclusion in the classroom.

Table 4  
*The Teacher Education at University*

Themes	Key words
Theoretical	teacher education seen as too theoretical
Practical	school placements in teacher education
The structure	teacher programme organized differently
Responsibility	students are given a big responsibility in their studies

*“At Campus Gotland the Department of Education is much smaller than at home, so they have smaller classes and are taught via video-conference with Uppsala. That was interesting.” (8)*

*“Secondly and related with the education degree, is the point that bachelor students are able to go to school once a week in order to work with children of different ages. This is an incredible help to make students realize two things: if they are really interested in becoming teachers, and also to put into practice the theory studied in the different lectures they have every day.” (9)*

The teacher students of different educational and cultural backgrounds could also elaborate on the characteristics of their own teacher education and compare it with the practice carried out at Uppsala University, Campus Gotland.

Table 5  
*Teachers’ Work*

Themes	Key words
Financial	salary
Working hours	regulated
Working conditions	high pressure, risk for burnout
Social status	low status in comparison with many other professions

*“They also explained the teachers’ work hard regardless of not so high salaries and the not so high teacher status.” (10)*

The students also compared the teacher’s work regarding salary, working hours and conditions, and how the teaching profession is regarded in society.

### Data Analysis

Tables one through Table five above show that these one-hour meetings between international students and Swedish students provided the opportunities for them to discuss a number of different themes and topics related to school and teacher education. There are four points to highlight.

Firstly, currently, the use of student-interactive video-conferences is not widely spread, especially considering the field of higher education in Europe. For the participating students, it was the first time they had this experience and they were generally very positive to this way of communicating. In the context of the present study, the video-conferences were between two campuses in Sweden and with international students at one end and Swedish students at the other end. Evidently, the set-up could just as well have been in two different countries with great geographical distances.

Secondly, the category and themes that the students were especially engaged in were related to central didactic issues and the actual work in the classroom. Not much focus was on technical details in the video-conference itself or on organizational matters related to the curricula and syllabi. This would imply that the student-interactive video-conferences gave the opportunity to discuss highly concrete matters related to the students’ background, experiences, ideas and future professional lives.

Thirdly, a wide range of themes could be reviewed in the one hour-conversation. Groups with a limited number of students and in the framework of organized student-interactive video-conferences provided the setting and circumstances to take part in the discussion in a personal but at the same time serious and planned way.

Fourthly, one-hour seminars with student interactive discussions focusing on making comparisons on such wide and complex areas as educational systems, teachers' priorities in the classroom and the organization of teaching and learning can definitely be a challenge and lead to stereotypical ideas, simplifications and misunderstandings. It is therefore of importance to have follow-up activities of various kinds to these seminars. Nevertheless, in order to promote international understanding these encounters are important when there is a purpose in a course of higher education to face students with accounts based on "real" and personal experiences.

### Discussion

Internationalization is given priority in higher education at all levels: undergraduate, advanced and for research purposes. Student and teacher mobility is one of the activities in this prioritized internationalization. At the same time, it is self-evident that not all university students will have the practical or financial means to carry out an exchange semester of studies in a foreign country. This can be illustrated by the national stipulated goal to reach for in Sweden regarding student mobility in 2018 which is 20% of the university student cohort. It is also relevant to include sustainability in this discussion and critically examine the effect of the increasing numbers of travels by students world-wide, primarily by air. It is thus necessary to find other sustainable means for the international sharing of personal and professional experiences in higher education, for instance in Sweden for the remaining 80%. Student-interactive video-conferences are one of the ways of working with an increased number of encounters in international and intercultural communication in a sustainable way.

The issues discussed in the one-hour-seminars were identified and classified in themes of five different categories: procedures in the student-interactive video-conferences, the organization of education at schools, the teaching and learning at schools, the teacher education at university and teachers' working conditions. There was a tendency that many themes were comparisons between Sweden and other countries of the third category: the teaching and learning at schools. Generally student teachers experienced these autonomous student-interactive video-conferences in an international context as an efficient means for discussing and sharing both professional and personal matters. They learned in other ways than by studying theoretical perspectives and these planned student-interactive video-conferences are according to the ideas of learning in the Vygotskian sociocultural perspective.

To conclude, student-interactive video-conferences can thus be used between student teachers for sustainable communication when the purpose is to integrate international, multicultural and multilingual perspectives into their teacher education. In today's world these perspectives are to be given priority and this way of creating contacts between student teachers from different cultural and educational context without travelling is a sustainable way of preparing future teachers for the challenges that they will encounter in their careers.

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### Appendix 1

Questions to use in the interactive video-conference between international students at Uppsala University in Uppsala and Swedish students at Uppsala University, Campus Gotland University.

What was it like at school when you were 10 to 12 years old? Describe an ordinary school day.

What do you remember about the teacher and the teaching situations?

How were the learning outcomes checked (exams and tests, oral or written check-ups, grades used)?

Tell us about the following: the lunch meal, the school yard, activities during the breaks, your way to and from school.

If you have time:

What do you consider to be the main ideas and beliefs in your school system about teaching and learning?

How would you describe the teacher's role in your school system?

In what situations do you think that children at your school learnt the most?

# Traditional and Technological Methods for Raising Pre-School Children’s Awareness of Environmental Pollution for Sustainability<sup>1</sup>

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## Abstract

In the preschool period children develop rapidly in cognitive, social-emotional, physical, psycho-motor, language, and aesthetic areas. In this period, besides basic habits and skills, it is important for children to gain environmental awareness. Research shows that children are mostly affected by environmental problems. Yet, living in a clean and healthy world is a basic necessity for children. For this reason, it is possible that children can show a healthy development in all developmental areas and create a healthy future by establishing ecological balance through gaining environmental awareness during the preschool period for sustainability. Science and nature activities in the preschool education program play an important role in creating an environmental awareness of the children in this period as they include activities to acquire environmental awareness and provide important contributions to helping children gain environmental awareness for sustainability. The present study was conducted using a total of 80 students attending pre-school institutions in Konya province. The environmental pollution awareness scale was used as pre – test and post – test prepared by the researchers. The data was analyzed via the SPSS 18 program. As the post test scores of preschool students revealed, there was a significant difference for the experimental group with regard to environmental pollution awareness.

*Keywords:* environmental awareness, preschool, technology assisted instruction, traditional method, sustainability.

## Introduction

According to Çepel, environment is the whole of the physical, chemical and biological factors that enable living things to survive and develop and keep them under their influence (Cited by Akçay, 2006). By this way it is necessary to define and protect the environment that directly affects the life of living beings. The formation and acquisition of environmental awareness in the children start from the young ages.

Acquiring the information about the environmental consciousness starts to form in the pre-school period for sustainability. Early-age environmental education allows students to demonstrate a positive attitude towards the environment in the later stages of their lives (Taşkın & Şahin, 2008).

Needless to say, sustainable environmental education leads to an increase in the value of the environment; and positive changes in the behaviors towards it. At this point, the main purpose is to raise environmental awareness, the development of sensitivity to the conservation and use of the natural environment for sustainability. The sustainability of individuals' attitudes and behaviors towards future environment depends on increasing their awareness in their early life (Buhan, 2006; Fedosejeva, et al., 2018).

People and institutions need to constantly renew and change themselves due to rapid developments in technology of any field. The most likely way to sustain and adapt to this change is attained through education. While the recent advancements in technology have become an indispensable part of the education, they offer alternative means of education-related activities for sustainability.

At this point, the issue of how we should offer sustainable environmental education to preschool children is a matter of question. More specifically, the period, in which they acquire attitudes and behaviors towards sustainable environmental education, has a great effect on their future life. Therefore, it remains unclear whether traditional or technology-assisted training methods will lead to a more permanent behavioral change towards sustainable environmental education. A plethora of studies have revealed whether traditional or technological methods affect the teaching and learning processes of environmental education of the preschoolers for sustainability. Raus (2016) described sustainability as a bridging concept between the existing western approaches towards environment and development and a new emerging ecological paradigm and proposed that a holistic education approach for sustainability of environmental education effective. Apart from this, Kabadayi (2016) examined education for sustainability from teachers' perspectives and emphasized that the teachers who actively work at schools and have a high expertise in a subject matter have to choose in-set courses to catch up with pre-service teachers who are being educated mostly more modern methods; therefore, they can adapt to the tremendous changes in education for sustainability. Salite (2015) also suggested the theme of practical wisdom in participative action research which initiated an attention to self-potential and the research on the development of complex networks features for the reorientation of education towards sustainability. Additionally, Copsey (2018) put forward that ESD itself is primarily a process of connecting and contextualizing learning and knowledge to the real environments and communities where they are based. Furthermore, Cincera (2013) stated that special attention needs to be devoted to linking new concepts with practical examples from school environments to improve environmental education sustainability. Gedžūne (2015) and Iliško (2016) noted that identification emerges as a pathway towards human inclusion in nature, which should be pursued in education for sustainability. Moreover, Zecha (2013) emphasized that numerous environmental educational organizations wish to have long-term cooperation, and work with children not only in short-term, but also in light of long-term sustainability. Additionally, in studies (Salite, 2002; Iliško, 2005; Salite, 2008; Gedžūne, Gedžūne, Skrinda, & Mičule, 2011), environmental education and education for sustainable development ought to be implemented in order to encourage a change of mind – a transformation in people's frames of reference from consumerism, ownership, egocentrism and exclusion orientation

to holistic and eco-centric worldview, coexistence in harmony, and awareness of being included in a community and its supporting system.

The aim of this study is to compare traditional and technological methods in harnessing sustainable environmental pollution awareness of the preschoolers.

Sub questions are as follows:

Is there a significant difference between pre-test achievement scores of preschoolers in the experimental and control groups in terms of sustainable environmental pollution awareness?

Is there a significant difference between the pre-test and post-test achievement scores of the control group preschoolers' sustainable environmental pollution awareness?

Is there a significant difference between the pre-test and post-test achievement scores of the preschoolers in the experimental group in terms of sustainable environmental pollution awareness?

Is there a significant difference between the post-test success scores of preschoolers between the experimental and control groups in terms of sustainable environmental pollution awareness?

The attempts made by the Ministry of Education in Turkey to disseminate preschool education throughout the country shows that early education is important for the sustainable development of the child in any domains. The environment in which children will live throughout their lives is constructed in pre-school institutions in terms of recognition, protection, sensitivity and sustainability to the environment. In this period, children are known to be very curious and sensitive to flora and fauna in nature. They tend to work as detectives of the nature and tend to keep their environment. They seem to be interested in the plants, animals and insects living in nature. Similar to scientists, they tend to carefully investigate and examine nature and its content. It should be a good start for children to harness awareness for sustainable environmental education. Needless to say, some precautions should be taken to prevent the excess of environmental pollution and alarming dimensions world-wide. Therefore, the methods for educating children at early ages have important roles in the formation of sustainable environmental awareness and the prevention and elimination of environmental pollution for gaining a sustainable output. It is believed that if children receive education on environmental issues at early ages, they will be the strict conservationists of the environment and sustain and transfer what they instilled in early years for the rest of their lives. However, it is controversial whether manipulating the traditional or technology-based methods will be more beneficial in preschool periods when students are considered to be in conflict with abstract concepts such as environmental pollution. In this respect, the results of the present study may be important in terms of shedding light on the future studies.

### **Design of the Study**

This study is an experimental study adhering to pre-test-post-test control group design. The participants were randomly assigned to experimental and control groups. Both groups were tested before and after the experiment. The pre-tests help the researchers to know the degree of similarity before the experiment between the groups (Karasar,

2011: 97). While the students in the experimental group were taught by technology-supported environmental education method the control group students were taught using the traditional method.

### Sample

The sample of the study included the students attending a kindergarten in the Karatay district of Konya. The school was chosen randomly. The research was conducted in the academic year of 2016. In total, 80 preschoolers participated in the study; based on which the control and experimental groups were formed including 40 each.

### Data Collection Tools

Preschool Students' Environmental Pollution Structured Interview Form (PSEPSIF) was developed and used by the researchers as the data collection tool. During the preparation phase, environmental educational gains included in the pre-school program of the Ministry of National Education of Turkey were taken into consideration. For each question, the scoring for PSEPSIF with 12 items (6 semi-structured and 6 open-ended) is as follows:

Table 2

*Grading the Environmental Pollution Structured Interview Form (PSEPSIF)*

Unacceptable	Partially Acceptable	Acceptable
1	2	3

### Data Collection Procedure

In the experimental and control groups, differences were investigated before the course, and PSEPSIF was conducted among preschoolers. With regard to the results of PSEPSIF, it was found that the experiment and control groups were homogenous, and there was no significant difference between the two groups. As a consequence the courses of treatment started in the groups.

In both experimental and control groups, the course lasted 8 weeks containing the total of 16 lessons. The experiment group was taught via technological methods while the control group was taught using general teaching methods. PSEPSIF was conducted as a post-test at the end of the eight-week course for both groups.

Technological tools such as computer, internet, data-show, slides and projection were used in the experimental group. In the control group, no technological teaching material was used and general teaching methods were used. In this phase, the researchers generally used the white board and the lesson was taught through the presentation method, verbal expression, explanation, and question-answer. Attempts were made to instill the behaviors that should be gained in the direction of the existing gains in the research. The courses in the control group were designed and structured by the researchers and presented to the students. In the research process, the concepts were explained equally in the experiment and control groups and special care was taken to make the groups as similar as possible in order ensure the homogeneity and objectivity.

### Data Analysis

The data were analyzed using SPSS (Statistical Package for Social Sciences) for Windows 23.0 program. Associated (dependent) t-test was used in evaluating the data. Some other testing techniques were run in case of the experimental and control groups such as mean, standard deviation, and t-value and freedom level of pre-test and post-test results were tabulated and interpreted.

### Results

In this section, findings from the data analysis are presented. Explanations and interpretations were made based on the findings.

Table 3  
*Distribution of Participating Students*

	Experiment Group		Control Group	
	N	f (%)	N	f (%)
Female	27	67,5	24	60,0
Male	13	32,5	16	40,0
Total	40	100,0	40	100,0

27 (67.5%) female students and 13 (32.5%) male students were in the experimental group, and 24 (60.0%) female and 16 (40.0%) male students were in the control group.

### Pre-Test Findings in Experimental and Control Groups

The pre-test scores of the students in the experimental and control groups were analyzed using t-test for the related (dependent) groups. The resulting data are given in Table 4.

Table 4  
*Comparison of Preliminary Test Scores in Experimental and Control Groups*

GROUP	N	X	SS	sd	t	p
Experiment	40	23,40	5,1580	39	-4,386	0,00
Control	40	19,35	3,7041			

Table 4 shows the results of the t-test of the experimental group where the technologic methods were implemented as well as the control group where the traditional methods are applied. Accordingly, it was found that there was a significant difference between experimental and control groups' achievement scores before experimental studies ( $t = -4.386$   $p < 0.05$ ). The resulting difference is in favor of the students in the experiment group. İlhan (2004) supported that there was no significant difference in the pre-test scores of the kindergarten students.

The analysis of pre-test and post-test scores of the students in the control group was done using t-test. The results are shown in Table 5.

Table 5  
*Comparison of Pre-Test and Post-Test in the Control Group*

GROUP	N	X	SS	sd	t	p
Control Group Pre-test	40	19,35	3,7041	39	-5,083	0,00
Control Group Post-Test	40	22,50	3,823			

The dependent (t-test) results of the control group on whether there is a significant difference between pre-test and post-test scores are given in Table 5. The results show that there was a significant difference between pre-test and post-test scores in the control group ( $t = -5.083, p < .05$ ). Given the mean score of the data, it can be concluded that this difference is in favor of post-test scores. This can be explained by the increase in the control group after being instructed through the traditional teaching methods. Kacar and Dogan (2007), concluded that there was no significant difference in the results of the courses implemented using traditional methods.

Analysis of the pre-test and post-test scores of the experiment group was done using t-test. The results are depicted in Table 6.

Table 6  
*Comparison of Final Test Scores*

GROUP	N	X	SS	sd	t	p
Pre-test Experiment	40	23,400	5,158	39	-6,005	0,00
Pre-test Experiment	40	29,725	4,8091			

As shown in Table 6, there is a significant difference between the pre-test and post-test scores of the experimental group ( $p < 0, 05$ ). This finding suggests that the difference between pre-test and post-test results of pre-school students is due to the effects of technological methods on academic achievement ( $t = -6.005, p < .05$ ). Çakıroğlu and Ünal (2016) found that there was a significant difference between the pre and post-test scores of the students in the study they carried out in favor of technology.

Analysis of the post-test scores of the students in the experimental and control groups was done using t test. The results are illustrated in Table 7.

Table 7  
*Comparison of Post-Test Scores with Experimental and Control Groups*

GROUP	N	X	SS	sd	t	p
Experiment	40	29,725	4,8091	39	-8,386	0,00
Control	40	22,500	3,823			

As Table 7 shows there appears to be a significant difference between experimental and control groups. It can be concluded that the experimental group being exposed to technological methods is favored ( $t = -8.386, p < .05$ ). Kacar and Dogan (2007) found that computer-aided education played a significant role in preschool education. İlhan (2004) concluded that there was a significant difference in favor of the experimental group in terms of the post-test scores for the kindergarten students in terms of technology assisted instruction.

### Conclusion

A preliminary test was conducted to determine whether there was a significant difference in the knowledge level of the students regarding the concepts included in the study. The results indicated that the groups were not homogeneously dispersed and that the experimental group had more preliminary learning about environment and environmental pollution.

It is seen that when the pre-test and post-test scores of the control group students are examined it was observed that the students learn about environmental and environmental pollution as a result of the course via traditional methods.

When the pre-test and post-test scores of the students in the experimental group were examined, it was found that the post-test scores increased significantly and there was a significant difference between the pre-test and post-test scores. It was seen that pre-school students were interested in technology-supported environment and environmental pollution, resulting in more permanent learning.

When the final test scores of the students in the experimental group and the control group were examined, it was seen that the post test scores increased significantly in the experimental group. Besides it was seen that there was a statistically significant difference between the post test scores of the students in the experimental and the control groups.

### Discussion

The environmental pollution issue in the pre-school program was investigated in the study of "Traditional Methods and Technology Assisted Methods comparison". After the issue of environmental pollution, the scale was administered among the students by the researchers themselves. In this application, students were asked 12 questions about environment and environmental pollution and they were asked to make a picture of how they wanted to live in the environment. According to the findings, the learning was attained as a result of the lesson conducted through both the traditional method and technology supported method. It was found that the technology supported methods were more effective.

Individuals need to have environmental awareness in order to solve the increasing environmental problems. These individuals encountering early childhood environmental education will become more conscious eco-friendly individuals in the future. In this context, the importance of environmental education is increasing day by day. However, this will lead to more conscious generations growing up in schools when they have a lifestyle habit rather than a few hours of lessons. In traditional teaching methods, mostly teachers teach lessons and students are passive listeners. Due to the memorization and the bound of the book in the teacher-centered teaching methods, the lessons become more boring as a result of which the environmental education is not realized at the desired level. Since human beings are in the center of nature, the students should also be centralized in the lessons (Özbuğutu, Karhan, & Tan, 2014). In technology-assisted education, students are involved in an interactive process and have fun, practice and learn. Nowadays, the use of technology in the lessons is very popular. The use of computer-based instruction, computer-aided instruction and classroom software is repeatedly tested in different forms both in domestic and foreign studies (Sezgin, 2002; Teke Bodur, 2006; Kacar & Dogan, 2007).

According to the findings understanding environment and environmental pollution; is an effective method that enables students to be more effective in attracting their interest and attention and improving their achievement.

### **Suggestions for Further Studies**

In the present study, the students were examined through a scale prepared about the environment and environmental pollution. Further studies can use different research methods. This study was limited to Konya province. Possible differences and similarities can be compared by conducting similar investigations in different provinces and regions. These surveys will give us a new perspective on the sensitivities of pre-school children in different provinces and regions with regard to environment and environmental pollution. Future research is suggested to replicate the research in elementary school in the course of Life Science and Science to be able to monitor the progress of learners in their learning.

This study, done by quantitative research method, can also be replicated by means of qualitative research method to reach an in-depth knowledge about the attitudes of students in terms of the environment and environmental pollution. Moreover, further research should be undertaken to work with broader samples to discover the roles of technology-supported education in pre-primary education institutions.

When preparing the annual program in the pre-school education, students need to be exposed to activities related to environmental awareness education in terms of the existing targets and the expected target behaviors to be acquired. The points to be considered in the preparation of these activities are suggested as follows: Training environments should be enriched with appropriate technological devices. Additionally, the teachers need practical training and seminars aiming to increase their competencies on technology supported teaching methods in order to make a better use of the technology in education. To realize this aim, it is necessary to organize meetings, seminars or environmental (tree planting, school or neighborhood garbage collection, etc.) activities to raise the awareness of the students and parents about the environment.

Apart from this, while preparing the education corner in schools, the science-nature corner should be prepared in detail and authentic samples should be replaced from the nature (sea shells, stones, and leaves) need to be examined through magnifiers. Furthermore, in school gardens, students should conduct a survey and provide plant cultivation in the soilfield. If there is no soil- rich field, the plants should be grown in big pots, and their maintenance should be done by children. In line with this, it should be emphasized that the students need to keep what they need while growing plants and how and why these materials (air, water, soil) should be kept clean.

To make the preschoolers love the nature, it is necessary to explain their responsibilities toward domestic and non-domestic animals, to create drama and story-telling about why they are respectful and sensitive toward their habitats, and organize trips to make them familiar with nature. In line with this, attention should be drawn to the students' inspections on these trips and to the sounds, smells and other living areas in the nature. Additionally, students should be shown the pictures, documents, photographs and other visual materials related to nature in order to create curiosity. Furthermore, students should be provided with the materials gathered from the nature in art activities and they should recognize these materials more closely. Additionally, students are suggested to draw the picture of the different parts of the nature. To make the environ-

mental education be more home-based in line with the school-based situations, parents need to be informed about the necessities of care via letters and what they should do with the children at home. Thus, the awareness of this matter may increase in their families. At the same time, it becomes healthier for students to be informed about their behaviors due to the same attitudes hold at home and school.

Note:

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### Appendix 1

Preschool Students' Environmental Pollution Structured Interview Form (PSEPSIF).

- 1) What is environment? What comes to your mind when I say "Environment"?
- 2) What is environmental pollution?
- 3) Is sea polluted? Who pollutes the sea?
- 4) Is air polluted? Who pollutes the air?
- 5) Is the soil polluted? Who pollutes the soil?
- 6) Do you know the meaning of this sign? 
- 7) What precautions can we take to prevent environmental pollution?
- 8) In what kind of environment do you want to live?

### Appendix 2

8-week preschool environmental education program.

- 1) Pretest application of the experimental and control groups.
- 2) "What is environment" training was given to the experimental and control groups.
- 3) "What is pollution" training was given to experimental and control groups.
- 4) "What is water pollution" training was given to the experimental and control groups.
- 5) "What is air pollution" training was given to the experimental and control groups.
- 6) "What is soil pollution" training was given to the experimental and control groups.
- 7) "Re-cycling" training was given to the experimental and control groups.
- 8) "Precautions to be taken against the pollution" training was given to the experimental and control groups.
- 9) "Friendly environment" training was given to the experimental and control groups.
- 10) Posttest application of the experimental and control groups.