Examining Literacy Development Holistically using the Play and Learn through the Arts (PLA) Programme: A Case Study

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Literacy is one of the most important areas of development in the early years settings. Several pieces of research examine the positive impact of the arts in children’s literacy development. However, most of them are focusing on specific literacy skills and not in providing a holistic examination of literacy. In addition to this, they adapt a structured methodology, with pre-decided lesson plans, which is contradicting with the liberal character of the arts. Having this in mind along with the importance of literacy as an area of learning, this research project was designed with the purpose to examine the effects of the arts on children’s holistic literacy development in the early years settings through a child-led approach. The ‘Play and Learn through the Arts’ (PLA) programme was used for a school year in a case study with 5-6-year-old children in Greece. The outcomes were measured using a mix-method approach. The findings showed the positive contribution of the PLA in children’s literacy development.

Keywords: literacy skills; Play and Learn through the Arts; arts; early years education; preschool education

Introduction

Literacy skills are one of the most important competencies in children’s development in the early years. Literacy is a crucial part of language development, which includes the ability to read and write and the ability for verbal and non-verbal communication (Whitehead, 2010). Literacy development in the early years settings has a significant contribution to children’s later literacy performance in primary school (Moritz et al., 2013). Taking this into consideration, it is important to find ways to support literacy
development in a meaningful way in the early years settings, which according to researchers (Saracho, 2017; Tymms et al., 2009; Siraj-Blatchford et al., 2008) is a very important level of education in building the foundation of knowledge.

The arts seem to be a very promising approach that has the ability to provide opportunities for literacy development in the early years. One main argument for this, is that the arts provide several learning opportunities through a liberal and relaxed environment (Vasudevan, 2014; Matthews, 2008). Reviewing the existing literature, it is obvious that there is a crucial link among art activities and literacy development (Maniati & Olcott, 2010; Wright, 2007). However, most of the existing pieces of research focus on one specific area of literacy, without providing a holistic examination of this aspect. In addition, it is obvious that although the arts offer a liberal environment, most pieces of research adapt a more structured approach using pre-decided lesson plans. This was the motivating wheel to design an interdisciplinary project, which utilises the arts as a vehicle to support literacy development through a child-led approach in preschool education.

Considering the above, this research project was formed. The purpose of this paper is to examine the effects of the arts on children’s holistic literacy development in the early years settings. The intervention used the ‘Play and Learn through the Arts’ (PLA) programme, which is an interdisciplinary programme that uses the arts to support literacy development through a liberal environment.

**An Interdisciplinary Approach with the Arts**

Interdisciplinarity is considered nowadays as an important element in the field of education, with an increasing number of researchers adapting this framework. It aims to unify the divided school knowledge in order to support students to build knowledge effectively. Interdisciplinary research recognises that different disciplines interact with each other, providing a holistic understanding in a meaning making process (Lattuca,
Nowadays, researchers adapt an interdisciplinary methodology, as it provides more opportunities for in-depth knowledge for the topic under investigation (Simeonsdotter-Svensson, 2015). Considering this argument, a lot of researchers (see Chang & Cress, 2014; Greenfader et al., 2014; Moritz et al., 2013; Bolduc, 2009) were interested in the benefits of the arts in children’s learning and used them as an innovative approach to support literacy development in the early years settings. From the following literature review, it is obvious that they tend to focus on specific literacy skills and in music as an art form.

Examining the literature about performing arts, music is an art form that has been in the spotlight for a lot empirical pieces of research of literacy development. Bolduc (2009) is one of the researchers who contributed in this area. He was interested in examining the effects of music in children’s phonological awareness in preschool and carried out a meticulous study with experimental and control groups in order to test his hypothesis. Following a pre-designed music programme, students in the experimental group showed greater advantages than children in the control group. Some years later, following the same footpath, Moritz et al. (2013) examined the same aspect in a longitudinal study. They were interested in investigating the effects of the amount of music training on children’s phonological awareness. The researchers included 5-year-old children in experimental and control groups and re-examined them in the second grade to test the long-term effects of the intervention. They concluded that the impact of music in children’s phonological awareness over time is beneficial.

Both of the studies above provide valid arguments about the benefits of the arts, and more particular of music, in children’s literacy development, by focusing on phonological awareness. They both focus their arguments in the early years settings and
examine the same topic using experimental and control groups. What is missing from these pieces of research is a more liberal art methodology, which gives the leading role to the children to decide and design the school activities. This practice would empower children to raise their own voice and it would be more compatible with the general liberal character of the arts. This is something that was taken into high consideration in this research project.

Remaining in performing arts, but proceeding in a different art form, drama is another art form that triggered researchers’ attention. Although most of them are focusing on the later levels of education (e.g. Anderson & Loughlin, 2014, Anderson & Berry, 2014; Fleming et al., 2004), there are some limited pieces of research that included participants from the early years settings. Moving forward from phonological awareness, Greenfader et al. (2014) focused on oral language development using drama play. They included one preschool classroom and two classrooms in primary schools in their sample. Investigating for two consecutive years, they implemented a performing arts programme in order to find out what were the effects of drama play on children’s oral language development. They concluded that students in the experimental groups had better verbal communication skills and vocabulary. It has to be acknowledged that this programme has a more liberal character, allowing the researchers to follow students’ needs in each class. However, this piece of research did not focus exclusively on preschool children, as the majority of the participants was from primary school.

Proceeding to the literature about visual arts, there is a link between children’s drawings and early literacy performance. Being more specific, the research from Chang & Cress (2014) proved this link in the early years settings. They were interested in investigating the possible ways that children’s drawings could be utilised to support oral language development in preschool age. They included 3-4-year-old children alongside
their parents and used children’s drawings as a means to facilitate verbal communication among them. The findings revealed the benefits of the art activities in children’s oral language development. It is interesting to note that in contrast with the previous pieces of research, this one adapted a more liberal approach with stimulus driven discussion without pre-decided activities. Considering the liberal character of the arts and the freedom they provide, it can be argued that this approach was more compatible to the content of the arts. However, it is worth indicating that the researchers focused only on one aspect of productive skills and did not investigate literacy holistically.

Summarising the discussion above, the arts have attracted researchers’ attention (see Chang & Cress, 2014; Greenfader et al., 2014; Moritz et al., 2013; Bolduc, 2009) towards an interdisciplinary research for the development of literacy performance. All of them agree about the positive effects of the arts, but it is obvious that there is an overemphasis on music and on specific literacy skills. The above pieces of research applied a robust and meticulous methodology, which resulted in valid findings. However, it is interesting to note that most of them followed a more structured approach with pre-decided activities and lesson plans, which seems contradicting with the liberal character of the arts. The following research project was designed and implemented, considering this argument.

**Purpose and Research Questions**

Taking into serious consideration Eisner’s (1998) argument about the lack of evidence regarding the beneficial contribution of the arts in school performance, a lot of researchers carried out relevant pieces of research. However, literature review shows that most of them focus on specific literacy skills, without providing a holistic examination of this aspect or they do not give a leading role to children in the decision-making part of the art activities. This was the motivating factor for this piece of research. Being more specific,
the purpose of this paper is to examine the effects of the arts on children’s literacy development in the early years settings, through child-led activities. Based on this, the research question is:

1. What are the effects on children’s literacy skills holistically when they are interacting with the arts through child-led projects?

**Participants and Procedures**

A case study was carried out, using an early years setting in Attica, Greece. The setting was selected using a simple random sampling technique. A list of all the schools of Attica was formed and there was a random selection of 10 of them. There were face-to-face meetings with these schools and the school that agreed to take part was the participant of the case study of this project.

The parents of the children and the practitioner signed off a written letter of consent and they were fully informed about the content of the intervention. In the beginning, the parents of 25 children agreed to participate. One of them changed school during the school year. There were two children with special educational needs that participated in the project, but they were not included in the assessment. In total, there were 22 5-6-year-old children, in which the 45.5% (n=10) were boys and the 54% (n=12) were girls, which maintained a balance in the numbers (see table 1).

[Insert table 1]

The intervention focused on the pedagogical outcomes of an interdisciplinary approach, using the arts to support literacy development. More specifically, the ‘Play and Learn through the Arts’ (PLA) programme was implemented for a full school year in the school setting of the students as part of their everyday activities.
The ‘Play and Learn through the Arts’ (PLA) Programme

The ‘Play and Learn through the Arts’ (PLA) programme is an interdisciplinary programme that aims to support children’s literacy development through the arts by creating a liberal environment in which every voice can be heard. PLA differentiates from the other art activities as students utilise different art forms to develop and facilitate literacy activities in an environment where there is no right or wrong answer. Children have a leading role in the whole process and decide the activities they want to carry out along with their content. Thus, there are no pre-decided activities by the practitioner but the activities are decided from the students in collaboration with the practitioner. PLA has been used in previous research (Theodotou, 2017; 2015) and showed positive outcomes in children’s levels of involvement and literacy as a social practice. Based on these findings, this study takes the PLA one-step further and investigates its impact on children’s literacy skills in the early years settings.

PLA embraces the pedagogical framework of the social construction of learning and gives emphasis on the social interactions as an important part of achieving knowledge. It recognises the fact that emergent literacy skills are an important aspect of literacy development and that literacy is an undivided area of learning and not fragmented skills that gather up together. PLA is not directly linked with a specific art form and thus the participants are free to select any art form they want. PLA provides some basic steps, which implemented on a weekly or monthly basis (see table 2). There are no ready-made solutions provided to the participants in terms of activities or lesson plans. The reason for this is to allow children to have a leading role in their learning and to be independent thinkers. Students and the practitioner collaborate and discuss in every step of the PLA and reflect on the whole process. The role of the practitioner is to facilitate the discussion
and children’s activities and not to lead them or direct them towards the correct solution of an upcoming problem or situation.

[Insert table 2]

The selected case study implemented the steps of the PLA for a full school year with a suggested period of 20-30 minutes for three times per week. There was a freedom to adapt this schedule according to their needs and interests. The participants decided to use paintings as an art form. There was an initial period of training the practitioner in order to support her to carry out the PLA successfully and to familiarise herself with the steps of the programme. To support the practitioner even more, there were monthly consultation meetings in order to discuss the progress and resolve any queries or matters arising.

**Data Collections Measures**

To answer the research question, a mix-method approach was used. Quantitative data was gathered with the Performance Indicators in Primary Schools (PIPS) in a pre-and post-test. PIPS is a measure that is provided by the Centre for Evaluation and Monitoring (CEM) of Durham University in the UK.

PIPS is a tool with a very good and meticulous structure that examines literacy holistically, gathering quantitative data about productive and receptive skills. More specifically, it examines the following skills: writing, picture identification, ideas about writing, rhyming words, repeats and letter/word identification. It is originally designed to access literacy and math performance but for the purpose of this project only the literacy part was used. A basic reason for selecting this tool was the fact that it has proved its purpose and value, as it is widely used in the UK schools. Moreover, it examines literacy from a holistic point of view without focusing only on one particular group of literacy skills.
A supplementary qualitative method was used to examine the effects of the intervention. After the completion of the intervention, a semi-structured interview was conducted with the practitioner about her experience and feelings of the project. Her views were compared with the quantitative data of PIPS.

**Data Analysis**

To answer the research question, quantitative data was gathered using PIPS in a pre-and post-test. Students’ demographics were collected and tested against PIPS to examine if they were acting as an influencing factor, using a mix model analysis (split-plot ANOVA). Data analysis shows that students’ demographics were a non-significant factor in children’s performance in PIPS in total, as there was no statistical significant difference in numbers in the majority of the cases. There were some limited cases in which there was a statistical significant difference such as in Writing in the factor Gender (p=.029), in Picture Identification/Vocabulary in the factor Family Status (p=.040) and Order of Birth (p=.030) and in Repeats in the factor Order of Birth (p=.003) (see table 3). This means that there might be a small influence in these areas, which can be explained with arguments from the existing literature about the important influence of the home environment in children’s literacy development (Hayes, 2016; Al-Alwan, 2014; Giallo et al., 2013; Rapp & Duncan, 2012) and the important influence of gender in children’s writing performance (Ramazan-Berk & Unal, 2017; Jihyun, 2013). However, reviewing the data from the descriptive statistics (see table 6), it is obvious that there was a good progression in each item of the measure. Therefore, considering this and the fact that the majority of the items of PIPS did not show a statistical significant difference, it can be argued that in total, demographics were not a major influence in children’s literacy performance.

[insert table 3]
There was a normal distribution in all items of PIPS in the pre-test \( (p=.149, p=.705, p=.419, p=.175, p=.489, p=.126, p=.212) \) and in the post-test \( (p=.084, p=.076, p=.056, p=.049, \text{ marginal acceptance-normal distribution}, p=.431, p=.534, p=.684) \) (see table 4) and thus the Paired Sample T-Test was used to compare the outcomes. The purpose of using this test was to examine if the means of children’s literacy performance were equal before and after the intervention. Data analysis shows that there was a significant mean difference between the pre-and the post-test in all 7 items of PIPS \( (p=.000) \), which reveals the impact of the intervention (see table 5).

In an effort to define this impact and looking at descriptive statistics (see table 6), it can be argued that there was a positive impact of the intervention in children’s literacy performance. Students had a good progress in all items of PIPS, as they scored higher in the post-test. A closer examination in the data shows that there were some items that children scored higher than the rest ones. Being more specific, in picture identification/vocabulary, rhyming words, letter identification and word identification, children had a higher score comparing to the other items. Although the intervention did not aim to develop particular literacy skills, but to facilitate literacy development in general, a reason for this increase was that children during the PLA suggested more activities that included the aspects above. As a result, they had more opportunities to practice these skills, enabling them to score higher.

To briefly summarise, the data analysis from PIPS reveals evidence from the positive impact of the art intervention and more specifically the PLA. Children had a good progress in all the areas under investigation in their literacy skills. The numbers in
quantitative analysis show the statistical significance of the intervention in children’s literacy performance over time. This positive impact is revealed in the descriptive statistics, in which we can see a good progress in all areas in the post test. This is very positive as it is the first step in providing arguments about the effects of the arts in literacy performance holistically in the early years settings.

The effects of the intervention were also examined with an interview with the practitioner of the setting to collect her views regarding the project and impact. Data analysis shows that the practitioner agrees with the above positive findings as she highlighted the beneficial impact of art projects in children’s literacy skills.

The practitioner holds a Bachelor degree in Early Childhood Education and a Postgraduate degree in Special Education. Her work experience includes approximately eight years in the school settings and one year as a mentor to undergraduate students. She also participates as a volunteer actor in the local theatrical team.

The data analysis shows that the intervention had a very positive impact to the practitioner’s feelings and attitude, as she made very positive comments about her total experience during the programme. She commented on the speed response and support and the creative ideas.

Q: Could you please describe me your experience during the PLA?

P: In total, it was a pleasure! I have to admit that the support I had was more than enough. It was amazing how quick the response was. For example, in the activity with the universe, we sent a letter to the sun asking for books. I said if the ‘sun’ does not reply… worst case scenario I will go and buy some books. It was amazing how quick we received the books from…. the sun (laughing) and I am really grateful for this.
During the interview, she agreed with the positive impact of the intervention on children’s literacy skills. She described some occasions, where children showed remarkable competencies and highlighted that this took place with their free will.

Q: What did impress you the most?

P: It was very exciting to see how quickly children engaged in the art activities and embedded literacy goals. I saw great progress in their reading and writing, even to those I didn’t expect. This was something they did during free play activities! It was so exciting to see that art and literacy were so closely interrelated and that children were constantly asking to play with our little Picasso and send him letters!

Last but not least, data analysis shows a good impact of the art intervention to the practitioner’s teaching and routines in general. The practitioner noted the great influence the PLA had in her teaching techniques and the fact that she will continue to adapt it in her teaching interactions with children.

Q: How are you planning to use this experience in the future?

P: Well, once you do something like this, you can never go back! This project has revealed a whole new amazing world for me and I am not willing to let it go. I have seen now with my own eyes the beneficial effects of the arts in children’s literacy skills and I will definitely continue using this approach in my teaching. I am thinking next year to try a different art form or a combination of some.

To summarise, the data analysis reveals positive outcomes of the art intervention in children’s literacy skills holistically from both quantitative and qualitative measures. Therefore, it can be argued that the data above, answers the research question and shows
the positive impact of the interdisciplinary art intervention in children’s literacy skills holistically.

Discussion

A literature review of the existing empirical findings reveals that there is a strong link among art activities and literacy development (Maniati & Olcott, 2010; Wright, 2007). A closer examination of these pieces of research shows that there are limited, if any, empirical findings that examine this aspect in the early years settings from a holistic point of view of literacy development. There is a tendency to focus either on one specific literacy area e.g. receptive language skills, verbal language skills etc. or to focus on the later levels of education. The findings of this study shed light on this aspect and provided empirical evidence from a case study, which can be considered as the first step in examining this aspect in the early years settings.

Examining these pieces of research, it is concluded that there is an overemphasis on music and on specific language skills especially in the early years. Focusing on the effects of music on young children’s phonological awareness, researchers provide valid evidence with their research methodology. Bolduc (2009), in an effort to investigate the effects of music on children’s phonological awareness, designed a research project and focused on the early years settings. The findings verified the significant advantages of children in the experimental group and the beneficial impact of music on children’s progress in their phonological awareness skills. Some years later, Moritz et al. (2013), in an effort to investigate the effects that the amount of music training will have on children’s phonological awareness, conducted a very meticulous longitudinal study. They resulted that musical stimuli have a very beneficial role in children’s phonological awareness and that music can facilitate this process over time.
The findings of our study enrich the above empirical pieces of research by providing further evidence and focusing on a different art form. They all agree on the beneficial impact of the arts on children’s literacy performance but they both follow a teacher-led approach to implement the art activities. The current study provides further evidence about the impact on children’s literacy skills through student-led art projects, which was something that was missing from the aforementioned pieces of research. What is more, this piece of research reviews literacy performance holistically without focusing on a specific area of literacy development. The difference in terms of the selected methodology is that this piece of research adapts a liberal methodology, in which children have a leading role and suggest the activities they are interested in, whereas the other pieces of research do not give this opportunity to young children as there are pre-decided activities by the practitioners during the intervention.

Remaining in the early years but focusing on a different art form, researchers focus on the effects of drama on children’s literacy skills but mainly in the later grades of education or on specific literacy skills. There are limited, if any, pieces of research that focus in this art form and examine literacy performance holistically.

Greenfader et al. (2014) focused their methodology on drama and included an early years setting in their participants. They were interested in examining the effects of drama on children’s oral language performance in preschool and the first two levels of primary school. Their result was that students who received treatments had a significantly better performance in verbal communication and vocabulary than those who did not.

The findings of our study have strong links with the empirical findings above, as they all agree on the beneficial impact of the arts on children’s literacy development. They provide evidence about the benefits of an art intervention in children’s literacy performance. The current research project enriches them further, as it provides evidence
of a different art form, specialised in the early years settings. Greendafer et al. (2014) specified their arguments in children’s performance in verbal communication and vocabulary. They focused on a specific area of literacy while examining the effects of an arts intervention, in contrast with our study that examined the impact of the arts in literacy holistically. Therefore, it can be argued that our project supplements the existing pieces of research by providing further evidence on this matter.

Proceeding with this argument and moving to a different art form, drawing has been investigated by researchers in an effort to examine its effects on children’s language development. Chang & Cress (2014) investigated this aspect and focused on the ways that children’s drawings could be used to develop their oral language in the early years settings. Focusing on parental contribution, they concluded that children’s drawings could be used as an exciting stimulus to support them in their language development during conversations with their parents.

This piece of research has strong links with our research project as they both included visual arts and focused in the early years settings. Another similarity is that they both agree that art experiences contribute significantly in children’s performance in literacy development in a preschool setting. The aspect of parental contribution was not included in our research project, as we focused on the teaching and learning process that took place in the classroom between the practitioner and the students. Chang & Cress (2014) focused on a single aspect of literacy development, and more specifically, on oral language development, which is very useful as it provides us with further insights in this area. However, a difference with our research project was that we aimed to provide a holistic examination of literacy, including verbal and written modes of communication while empowering young children to have a leading role in the teaching and learning
process. Therefore, it can be argued that this research project enriches the existing pieces of research and it is the first step in producing evidence towards this direction.

Before reaching any conclusions, there are some important aspects that need to be taken into consideration. The findings of this research project derived from a single case study with one school setting, which means that there was no experimental group to compare the outcomes with. Moreover, in social sciences and especially in education, there should be a careful justification when making arguments about children’s progress, as there is a variety of factors that might contribute to this, apart from the intervention. Being more specific, it is expected that children will have some kind of development in due course, as an outcome of nature and nurture. In addition, practitioners’ practices, home environment and after school activities might contribute in children’s progress and motivation. Therefore, it can be argued that there might be one or a mixture of the above factors that contributed in children’s progress.

On the other hand, a valid counterargument is raised when reviewing closely the art intervention that was implemented. Being more specific, looking closely at the content and the pedagogical framework of the PLA, there is a direct focus on literacy development through playful activities in every step. What is more, children have a leading role in the whole process suggesting and implementing activities that derive from their innate desires. This by itself results in developing ownership of the activities and the whole process and in putting great efforts to succeed the goals. Thus, it can be argued that using PLA, children have opportunities to develop their literacy skills in a liberal environment which is derived from children’s innate desires. During this process, literacy goals were embedded in an indirect and playful way as the practitioner facilitated children’s thinking in order to recognise the literacy goals of the activities they were suggesting.
Having these arguments in mind, it can be concluded that the findings from this research project contribute to the discussion about the benefits of the arts in children’s literacy performance in the early years settings. Evidence from both quantitative and qualitative measures supports this argument. Therefore, to answer the research question, it is obvious that the art intervention, and more specifically PLA, had a positive impact in children’s literacy development holistically. This seems a promising factor for further investigation with a larger sample, including both control and experimental groups.

Conclusions

This research project focused on the examination of the effects of the arts in children’s literacy development through student-led projects. During the literature review, it was discussed that there are limited pieces of research that investigate the effects of the arts on children’s literacy skills holistically in the early years settings, as they either focus on one specific literacy area or during the later levels of education. In addition, there is an overemphasis in music activities, which embraces a teacher-led approach. Taking into consideration this fact and the importance of literacy as an area of learning, the purpose of this study was formed.

A case study with 5-6-year old children was used to investigate this aspect. As an art intervention, the ‘Play and Learn through the Arts’ (PLA) programme was used, which has been implemented in two previous case studies to examine the effects of the arts in children’s levels of involvement and in the development of literacy as a social practice (Theodotou, 2017; 2015). In this study, PLA was implemented for a full school year and a mix method approach was used to test the outcomes. The findings revealed the beneficial contribution of the art intervention to children’s literacy development from both data collection measures. Although there might be other factors that contribute to this progress, a strong link was identified with the PLA. Therefore, to answer the research
question, the arts can contribute very positively to children’s holistic literacy achievements in the early years. The interdisciplinary way that the arts were used, provided a liberal environment in which students had a leading role and developed ownership of their school activities.

Some limitations should be considered before reaching any conclusions. There was a random sampling selection, which followed the ethical guidelines but a bigger sample would be desirable. It has to be reminded that this was a case study in an effort to provide arguments about this aspect in the early years settings. Therefore, it can be considered as a positive start in developing empirical knowledge towards this direction. These findings are useful to early childhood practitioners in implementing pioneering and exciting ways to support children in their literacy and social development, and to researchers in continuing this research in an international level.

References


