

Using Songs as Springboard to Teaching Poetry and Narratives towards Improved Comprehension

Mar Florence DC. Sebastian

Alexis G. Santos National High School, Bustos, Bulacan, Philippines
marflorence.sebastian@deped.gov.ph

Abstract: *The aim of this study is to improve and regain the interest of Grade 8 students of Alexis G. Santos National High School in studying literature especially in dealing with poetry and narratives. This research utilized the descriptive type of design, particularly, the quasi-experimental. 108 Grade 8 students participated in the study, serving as the control and experimental group with equal number and characteristics. After a seven-week exposure to songs as springboard to literature lessons of the experimental group, the difference between the means of the pre-test and post-test was measured to determine significance of the study. The researcher computed for the F-Test Two-Sample for Variance of Post Test for Control and Experimental Group, and t-Test of Paired Two-Sample for Mean of Post Test. There is a significant difference between the mean scores of the two groups, and the finding implied that the intervention material is effective for improving learner performance in English 8, specifically, in their understanding of basic figurative language and literature. The researcher recommended that teachers, curriculum planners and school heads consider motivation as an important aspect in the teaching and learning process.*

Keywords—song; poetry; narrative; improved comprehension; literature

1. INTRODUCTION

Ever since learning the language, Filipinos have considered English as a valuable asset. As the lingua franca of the world, it has opened many doors for communication and opportunity for our fellowmen. Seeing this expansion and the benefit of using the language to heighten foreign policy and promote globalization, it was included by our forefathers in the 1987 Philippine Constitution as an official language “for purposes of communication and instruction” (article XIV, section 7). From laws and court decisions, religious affairs, print and broadcast media, business, and more importantly, in education, English has been the medium aside from the Filipino language for carrying messages throughout the archipelago and all over the world.

Learning English has been clearly an advantage in many ways (Ward, 2017), and because of this, the K-12 curriculum of the Department of Education banks on the language being taught to learners as early as grade 1. The second language is the medium of instruction of the majority of subjects in the basic curriculum, with the goal of oral fluency.

Literature plays a very vital part in the language curriculum (Aydinoglu, 2013). Learning the literature of a particular country is also learning the nation’s culture, customs, and traditions. It also instills moral values to students, a holistic approach to learning a language. DepEd secondary education curriculum for English is divided into four categories: Philippine Literature for Grade 7, Afro-Asian Literature (the literatures of Asia and Africa) for Grade 8, English and American Literature for Grade 9, and World Literature (including Mythologies and Folklore) for Grade 10 learners. As the K-12 language curriculum guide puts it, an effective language arts and multiliteracies curriculum “draws on literature in order to develop students’

understanding of their literary heritage.” In this case, the knowledge of a learner in dealing with literature is important in understanding not only the cultures of the world, but also his/her view of him.

However, students’ waning interest in literature has been a challenge for teachers. Some of the problems that teachers face in literature teaching include low language proficiency levels, lack of reading skill, low motivation, lack of prior knowledge in literature, and lack of student awareness of its importance (Isikli, 2017). A study conducted by the National Book Development Board in 2017 revealed that Filipino non-school book readers remain high at 80 percent. This means that four out of every five children in the country do not have interest in reading. A major contributory part of this trend of decline is the make-up of our learners today.

It is believed that literature is essential to developing not only language fluency but also communicative competence of Filipino learners. A study showed that communication skills affect the qualities of an educator. (Asio & Riego de Dios, 2018; 2019) Therefore, it is very vital to find a suitable approach that focuses on delivering strategic instruction to the ones catered by the literary curriculum. Now more than ever, teaching approaches and methods have to fit 21st century learners. Professionalism in the field is a key. Thus, professional development is necessary for teachers to be at par with the current status of communication skills and the like. (Asio, Riego de Dios & Lapuz, 2019; Asio & Jimenez, 2020).

Creativity is the name of the game, and with this in mind, one concept is a very intriguing option—music. Integrating music to language learning provides for a stimulating experience for learners. What makes listening to songs and singing or dancing with it is its universal appeal. Music connects people, cultures, and languages, therefore paving

the way to a song-integrative language curriculum. It also offers a plethora of options for the teacher in conducting strategic activities, as many songs are available to be utilized in every subject that may connect with 21st century learners.

Music and learning go together seamlessly (McIntire, 2007). They create a relaxing atmosphere to students as songs ease out students' perplexities and lessen the pressure they feel. Moreover, considering the entertaining aspects of singing to daily language activities, songs as motivational tool in teaching literature is a very fascinating notion.

Considering all these, the researcher focused on using songs as motivational tool to teaching figurative language and literature. The teacher is the link between the learners and the text, and ultimately, to learning. Similarly, figurative language is the key to understanding literature.

1.2 Statement of the Problem

This study aims improve and regain the interest of Grade 8 students of Alexis G. Santos National High School in studying literature. With the use of songs, the researcher look into the possibility of enhancing comprehension in reading poetry and narratives of selected Grade 8 students during the Academic Year 2018-2019.

Specifically, it sought answers to the following question:

- 1) Is there a significant difference in the comprehension level of students as reflected through their pre- and post-test scores after exposure to songs as springboard to teaching figurative language?

2. RELATED WORKS

To many people across the globe, music is an important part of everyday life. (Khaghaninejad & Fahandejsaadi, 2016). It conveys different levels of emotions, and it brings people closer. Moreover, it gives us an identity, based on the songs that we listen to. We relate to different kinds of music, but we cling to a specific genre, a specific set of sound, lyrics, or melody. Many people sing tunes to make a stand, and to tell what they feel without really speaking. As such, music becomes language, and language becomes music. During human's early language acquisition, language is perceived as music.

In addition, music and language have a lot of similarities. Both are founded on acoustic material (phonemes and tones) in systematically structured sequences with particular consistencies. Electrophysiological evidence proposes that brain properties and similar fundamental neural substrates share the workload in the processing of semantics, syntax, and prosody.

Plato wrote that musical education is a more powerful tool than any other, because rhythm, harmony and melody find their way into the innermost places of the soul, creating

a spirit of a rightly educated person graceful, elegant and beautiful. As such, in Ancient Greek culture, music implicates language. Language distinctively empowered the Greek listener to specify the mood which the rhythm and tune is supposed to represent. One must also look to the Greek myths in relating language to music. The origin of the word 'music' came from the Greek mousikas, which means 'from the muses', and in understanding it, the three classical elements of mousikas (melody, verse, and dance) all relate to language: intonation, word, and non-verbal communication.

The generation of learners today—referred to as the Generation Z—completely revolutionized the learning styles as we already know. According to Abrahams (2015), children born between 1995-2009 perfectly sums up the definition of 'tech-savvy'. They use technology as a way of life. Abrahams mentions three learning styles very prevalent to the Gen Z: (1) they are multimodal learners, as they need to be involved through several learning platforms where information can be delivered fast and without fail; (2) they require no spoon-feeding, as conventional teaching strategies where the teacher is the primary source of information has completely gone away, and authentic and contextualized materials are now the trend in classroom instruction; and (3) they have too much information, but not enough evaluation, because Gen Z learners have access to a plethora of information in just a touch of the screen.

Experts in the field of education have asserted that listening to songs in a second or foreign language (L2) can offer interesting, engaging, and motivating educational material. Moreover, they argue that singing can enhance the L2 learning process because it improves listening and speaking skills, pronunciation, intonation, and vocabulary (Ludke, 2010). To date, however, there is very little research evidence that insulates singing as a tool to increase L2 skills. Few research materials focusing on the effects of harmonies on the nervous system, however, have strong implications for education, said Kraus (2017). She further argued that the brain is unable to process all of the available sensory information for every second, and therefore, these pieces of information must selectively enhance what is essential.

Weinberger (2006) notes that songs occur in every culture. It offers us a natural and rhythmic avenue for learning. From children singing their ABC's even before they can really say them, to children's books having a specific and regular rhyme or rhythmic pattern, several studies suggest that there is a very strong relationship between literacy and music. Through songs, children learn how to: (1) understand language; (2) experiment with rhythm, rhyme, words, beat, and melody; (3) think creatively and holistically; (4) make connections between written and spoken language; (5) practice motor development and motor coordination; and (6) listen effectively.

Using songs, humor and parody in the language classroom have both linguistic and cognitive weight in boosting English language acquisition. It helps to improve cross-cultural and interactive skills in speaking and communication in general. Song lyrics stimulate and arouse phonetics, vocabulary and develop grammatical skills. Students become motivated, and the influence of affective filter is lowered towards an acceptable level through song-based activities combined with humorous lyrics. Moreover, listening skills become more intense and focused. During the digital age, an extraordinary collection of music can be downloaded at little or no cost and numerous websites from around the world are available for educators and students. Creativity and imagination are aroused and encouraged in a positive language classroom atmosphere where music is fused and integrated, as it enables optimal learning.

According to Scripp (2012), there is a strong evidence based on meta-analyses which finds positive substantial links between music and spatial-temporal reasoning, achievement in math, achievement in reading, and strengthening of social-emotional or behavioral objectives. The presence of strong associations between music and other subject areas coincides with evidence for positive extra-musical impact of music instruction.

Singing can have a great effect on the intrinsic motivation of a child, aside from it being an enjoyable activity, as chronicled in Good (2011). In her study, Ecuadorian students with Spanish as their first language (L1) were asked to study a novel English passage for two weeks. Thirty-eight children, serving as respondents, were divided into two groups; the former in the singing group learned the passage as a song, and the latter in the speaking group learned the selection as a spoken poem.

Singing songs and integrating music to language lessons, Sigurðardóttir (2012) further argues, is a very effective tool in the English as a second or foreign language classroom because of its appeal to the language learners. It removes language barriers, and it eases out tensions of students to set up the language environment. In her qualitative study, she recommended that educators to be keen in incorporating music in their lessons to better increase student engagement and motivation. She supported her findings through details on how teachers can incorporate music in teaching young learners letters, numbers, colors, the days of the week, months, seasons, and body parts. Sigurðardóttir believes that as children grew, the more challenging it becomes for the teacher because of the increase in their vocabulary. Music and song lyrics enable creative writing and independent thinking.

Añaves (2012) developed a program of activities to find out if the reading comprehension of students in the 8th grade can be enhanced through songs as selections. He used

the Philippine Informal Reading Inventory (Phil-IRI) as baseline data for the comprehension level of the student-respondents. The results of the study showed majority of the learners improved on their reading comprehension skill, although only 13 out of the 50 student-respondents went from the instructional level to the independent level of their reading comprehension skill. Añaves recommended that in order to enhance comprehension, songs should be part of the selections included in modules and textbooks in the elementary and secondary education curricula.

In terms of motivation, Lugtu-Medina (2017) introduced innovation in improving the competency of students in literature. She further recommended that teachers' creativity and innovation is the key in delivering essential curricular content for 21st century learners. Mugtu also argued that teachers should find every possible avenue to incorporate innovation in learning English literature, so as to improve learner interest in the reading selections. Furthermore, Jimenez (2020) also mentioned factors in motivating teachers in developing supplementary learning materials.

Innovation in teaching English is also the theme of Defu's (2014) dissertation, where he recommended that in developing activities in teaching English, they should be based on authentic life experiences and interests of learners. The content and means should be as real as possible. Activities should also contribute to learning English and developing skills of students so as to improve language use.

3. METHODOLOGY

3.1 Design

This paper utilized the descriptive method of research, as it intends for a description and identification of how significant a variable to be tested affects the current state of the respondents. Specifically, the quasi-experimental research strategy, with a control and experimental group pre- and post-test design data, is used to estimate the causal impact of the intervention on its target population. A reading comprehension and figurative literacy exam crafted by the researcher is used as the pre- and post-test of the research which acted as baseline data of the study.

In terms of the music included in the experiment, the moral values of the text materials are considered in the selection of songs. Pop music is utilized in the study, with the elements of timelessness and musical appeal as criteria for inclusion.

3.2 Respondents

The respondents of the study consisted of Grade 8 students of Alexis G. Santos National High School during the school year 2018-2019. Purposive sampling is used to determine the subjects of the study, since four (4) heterogeneous sections handled by the researcher are utilized, both as the experimental group and the control

group. These heterogeneous sections are handled by the researcher, as the composition of these groups is believed to best convey the results of the quasi-experimental research. The pre-test scores of the respondents are recorded and measured for variance by the researcher to ensure congruence of the control and experimental groups.

The researcher currently handles English subject in five (5) sections of the Grade 8 level, one of them a homogenous class, and four (4) of them heterogeneous. Among the heterogeneous classes, 8-Rizal and 8-Bonifacio, composed of 54 students with different levels of intelligence, language skills, and reading comprehension levels; and 8-Del Pilar and 8-Mabini, also having 54 students with diverse characteristics, are the prospective subjects of the study.

3.3 Instrument of the Study

In order to have a content-valid research instrument, the researcher utilized and administered a reading comprehension and figurative literacy test to compute for their mean differential. The components of the achievement test represent reading comprehension, basic figures of speech literacy, and literary analysis.

The reading comprehension and figurative literacy test contains items as regards different figures of speech, such as simile, metaphor, personification, and hyperbole. It also includes literary works from Africa and Asia for reading comprehension and literary analysis. There are 60 items in the said test.

The module ran for seven weeks, and each week featured a selection and figure of speech taken from DepEd's Learner's Material for Grade 8. Songs that have associations either with the message, theme, or social context of the material, and concrete samples of figurative language, are included as motivational tools in the experimental design. Basic literary devices, such as simile, metaphor, personification, hyperbole and apostrophe, are the ones included in the program, as they are the figures of speech under the curriculum for grade 8 students. The selected songs are the springboard to either the selection or the literary device in focus. These songs are played through a music player or through an accompaniment of instruments like guitar, sung by the teacher. Subjects identified as the control group received the same lessons, but with poems and sample statements as motivational tool, with no singing and listening to songs.

3.4 Statistical Analysis

To find out if the conduct of the program has a significant effect on the comprehension scores of the two groups in the study, the IBM SPSS Statistics 20 is utilized by the researcher to compute for the means and percentage scores of the pre- and post-test of the respondents. Dependent and Independent Group Sample t-test for

Correlated Means and Pearson r correlation analysis are the measurement tools used by the investigator to find out if there is a significant difference between the pre-test and post test scores of the subjects of the study.

3.5 Data Gathering Procedure

After the pre-test, students in the Control Group (CG) and the Experimental Group (EG) were given lessons about the figures of speech for seven weeks, albeit not in succession. The lessons were given a day before or after a literature lesson. This is for students to discover, identify, and apply how figurative language applies to stories and selections. In the EG, songs were either sung by the teacher and the learners or listened to through a player, in order to introduce each figure of speech. Pop songs and timeless classics were played to the students, as they identify which unique characteristic of the song is implied in every lesson. Reinforcement is also done through singing and listening to songs to ensure mastery of each figurative lesson.

Poems and sample sentences were provided, on the other hand, to the CG in place of the songs. The same content, approach and standards were delivered to both the CG and EG to ensure that all learners are given a fair chance of succeeding in the measurement of learning.

Similarly, when students learn through their own initiative and on their own, they learn more effectively. When they are exposed in various engaging activities such as singing and listening to songs, it maximizes their learning in English and they discover an area with which to apply their language skills (Pacasio, 2009). It has been observed that when learners know the music being played, they sang along with it, and they listened very attentively to the information given to them as regards the song's figurative meaning. When the song was not known to them but they like its melody and lyrics, they asked for its title for them to listen to it later. Although it was observed that music became the center of attention for every discussion in the EG, learners were also spirited in terms of the activities regarding the figure of speech in focus. This observation supports the finding of Castillo in Pacasio (2009) that when learners are motivated in learning a second language, they have a higher rate of language acquisition and learning. Instrumental motivation and the need for achievement are important factors to be considered for second language teaching and learning (Dornyei in Manuel, 2014).

4. RESULTS AND DISCUSSION

The aim of this research is to improve and regain the interest of Grade 8 students of Alexis G. Santos National

High School in studying literature with the use of songs. The succeeding tables present the result of this study.

Table 1. *F*-test Two-Sample for Variance of Pre-Test for Control and Experimental Group

| F-Test Two-Sample for Variances | | |
|---------------------------------|-------------------------------------|--|
| | Pretest Raw Scores of Control Group | Pretest Raw Scores of Experimental Group |
| Mean score out of 60 Items | 18.83 | 22.94 |
| $p(F < = f)$ one-tail | 0.02* | |

* $p(t < = 0.05)$ significant

Since the p -value from the *F*-test Two Sample for Variances is 0.02 and is less than 0.05, the researcher concluded that the variances of the two groups are unequal. Therefore, the researcher used *t*-Test: Paired Two-Sample for Mean.

Table 2. *t*-test of Paired Two-Sample for Mean of Pre-test

| t-Test: Paired Two-Sample for Mean | |
|------------------------------------|--------------------|
| | Pretest Raw Scores |
| $p(t < = t)$ two-tail | 0 |

Since the p -value from the *t*-test: Two-Sample for Variances is 0 and that is not less than 0.05, the study concluded that there is no significant difference between the mean scores of the two groups.

In general, result of the pre-test indicates that the researcher had an equal level of learners for the CG and the EG, a vital prerequisite in the conduct of the experimental design in allowing the researcher to minimize the effect of all factors except the independent variable of the study.

After seven weeks of figurative language and literature lessons for both the EG and CG, the researcher assessed the students' level of comprehension with regard to their knowledge of the figures of speech and analysis of literature. The same set of 60-item questions and statements present in the pre-test were given in the post test to measure the progress of the students in terms of their understanding of the five basic figures of speech.

Table 3. *F*-Test Two-Sample for Variance of Post Test for Control and Experimental Group

| F-Test Two-Sample for Variances | | |
|---------------------------------|--------------------------------------|---|
| | Posttest Raw Scores of Control Group | Posttest Raw Scores of Experimental Group |
| Mean score out of 60 Items | 32.37 | 37.26 |
| $p(F < = f)$ one-tail | 0.35 | |

$p(t < = 0.05)$ significant

Since the p -value from the *F*-Test Two Sample for Variances is 0.35 and is not less than 0.05, the researcher concluded that the variances of the two groups are equal. Therefore, the researcher used *t*-Test: Paired Two-Sample for Mean.

Table 4. *t*-Test of Paired Two-Sample for Mean of Post Test

| t-Test: Paired Two-Sample for Mean | |
|------------------------------------|---------------------|
| | Posttest Raw Scores |
| $p(t < = t)$ two-tail | 0.01* |

* $p(t < = 0.05)$ significant

Since the p -value from the *t*-test: Two-Sample for Variances is 0.01 and that is less than 0.05, it is concluded that there is a significant difference between the mean scores of the two groups. Specifically, the mean of the experimental group of learners is higher than that of the learners in the control group.

The findings imply that the intervention material is deemed significant for improving learner performance in English 8, specifically, in their understanding of basic figurative language.

It has been observed that students have vastly improved on their attitude toward learning, specifically, toward reading literature. With songs as motivational tools for learning figures of speech, students found learning figurative language an easy task, and the entertainment value of songs have found their way to improving their study habits. The language and literature tasks completed by the learners have immensely enhanced as well, as they find more enjoyment in looking for an appropriate song in different learning activities.

As students' instrumental motivation improved after the study, so as their outlook towards literature. Poems and stories have become a positive literary experience, and they usually associate song lyrics and meaning to the overall message of selections. As observed, their responses to answers that require higher-order thinking skills have become frequent and expressive, making literature lessons an engaging activity for them.

The result of the study is in rhythm with the research conducted by Israel (2013), which posited that motivation, music and learning have a distinct and efficient relationship for the improvement of student performance.

The result also runs parallel to Israel's statement that songs give a positive attitude when learning a second language, as cited by the observations during and after the experimental research. Students' motivation and engagement have vastly improved because of the integration of songs and singing in lessons involving figures of speech, and this runs similarly to the study of Lim cited in Manuel (2014) where she found out that instrumental motivation is the reason for students in Cambodia to learn English. In addition, Sioson (2011) expressed the same view that motivational and interactive activities, such as singing and dancing, is an important predictor of students' language performance.

5. RECOMMENDATIONS

In light of the foregoing findings and the drawn conclusions of the study, the researcher has come up with the following recommendations:

- 1) Singing and listening to songs, and music in general, must be incorporated in language activities. It boosts the confidence level of students and encourages them to speak their minds out in lessons that deal with the message of the lesson. Future researchers must conduct a study on the impact of songs as springboard to different lessons and different subject areas so that a meaningful comparison can be made in relation to the study conducted. Songs not only lessen the affective filter of learners to an acceptable level, they also inspire creative interpretations and explanations from the students regarding a topic.
- 2) Teachers must expose students to singing and listening activities more often, and parents must also ensure that their children find time to listen to songs with great aesthetic effect and language quality. Learners will find literature more diverse but concentrated through linking the literary works they read to the meaning of songs they often listen to. Moreover, music also boosts creativity and critical thinking, aspects important for literature analysis.
- 3) Further study about singing and listening to songs must be conducted in a larger scale, with a larger respondent groups involved, to add validation to the study.

6. REFERENCES

- [1] Almond, B. J. (2012). Theory: Music underlies language acquisition. *Rice University News & Media Relations*. <http://news.rice.edu/2012/09/18/theory-music-underlies-language-acquisition/>
- [2] Añaves, J. M. (2012). *Development of reading comprehension using selected songs*. [Unpublished master's thesis]. University of the Philippines
- [3] Asio, J.M.R. & Jimenez, E.C. (2020). Professional development, organizational climate, supervisory rapport and overall satisfaction of employees: An attitudinal study. *International Journal of Scientific Research in Multidisciplinary Studies*, 6 (4), 34-40. <https://eric.ed.gov/?id=ED605144>
- [4] Asio, J.M.R., & Riego de Dios, E.E. (2019). The college students' perspective on what makes an educator well-qualified. *Journal of Pedagogical Research*, 3(3). <https://doi.org/10.33902/jpr.v3i3.124>
- [5] Asio, J.M.R., Riego de Dios, E.E. & Lapuz, A.M.E. (2019). Professional skills and work ethics of selected faculty in a local college. *PAFTE Research Journal*, 9(1), 164-180. <https://eric.ed.gov/?id=ED598225>
- [6] Asio, J.M.R. & Riego de Dios, E.E. (2018) 21st century attributes and skills of a teacher in the perspective of college students. *Online Submission*. <https://eric.ed.gov/?id=ED594675>
- [7] Boothe, D., & West, D. (2012). English language learning through music and song lyrics—The performance of a lifetime. *The Future of Education*. <https://conference.pixelonline.net/FOE/files/foe/ed0005/FP/0475-ITL949-FP-FOE5.pdf>
- [8] Defu, M. (2014). *Innovative model in teaching english language in elementary and middle school based on theories of educational psychology*. [Unpublished doctoral dissertation]. Bulacan State University.
- [9] Fahandejsaadi, R., & Khaghaninejad, M. S. (2016). *Music and Language Learning*. Shiraz, Iran: Shiraz University Publications, Inc.
- [10] Jimenez, E.C. (2020). Motivating factors of teachers in developing supplementary learning materials (SLMS). *International Journal of Advanced Research*, 8(5), 108-113. <https://dx.doi.org/10.21474/IJAR01/10912>
- [11] Lems, K. (2016). Learning English through music in the digital age. *Digital Commons @ NLU*. https://digitalcommons.nl.edu/faculty_publications/82/
- [12] Luna, R. M., & Vera, B. B. (2013). *Teaching English through music: A proposal of multimodal learning activities for primary school children*. [Unpublished master's thesis]. University of Málaga.
- [13] Manuel, V. V. (2014). *The relationship of language exposure, motivation, and language learning strategies to scores in language proficient test of grade six pupils*. [Unpublished master's thesis]. Bulacan State University

- [14] Medina, M. C. (2017). *Enhancing students' motivation for improved competency in literature through teacher-innovated graphic organizers*. [Unpublished master's thesis]. Bulacan State University.
- [15] Morala, L. S. (2015). *The teaching and learning of music through the developed module: basis for enriching fundamentals of music subject*. [Unpublished master's thesis]. Bulacan State University.
- [16] Moss, Joy F. (2005). *Literature, Literacy, and Comprehension Strategies*. Urbana, Illinois: National Council of Teachers in English.
- [17] Nanquil, L. M. (2009). *The role of motivation in the academic performance of selected high school students*. [Unpublished master's thesis]. Bulacan State University
- [18] Reoperez, M. G. (2006). *Integrated literature-based approach: towards improving the comprehension and interest in reading of college freshmen*. [Unpublished master's thesis]. University of the Philippines.
- [19] Scripp, L. (2012). An overview of research on music and learning. *ResearchGate Online Submission*. <https://www.researchgate.net/publication/245362946>
- [20] Sigurðardóttir, D. (2012). *Language learning through music*. [Unpublished master's thesis]. Sigillum Universitatis Islandiae.
- [21] Stansell, J. W. (2005). *The use of music for learning languages: a review of the literature*. [Unpublished master's thesis]. University of Illinois at Urbana-Champaign.