Using Game-Based Learning Activities to Promote Foundational Literacy Skills, Inclusion, and Equity

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Abstract

Learning-by-doing is one of the influential concepts that the prominent American philosopher and education reformer, John Dewey (1859-1952) emphasized. The purpose of the paper is to demonstrate how foundational literacy skills, inclusion, and equity can be achieved through game-based learning activities. Foundational literacy skills include phonological awareness, phonics, and word knowledge which are the essential skills to master vocabulary skills – reading, spelling, and semantics. Three activities will be introduced in this paper and the audience will be invited as immediate participants if possible.

Keywords: game-based learning, foundational literacy skills, inclusion, equity

Reasons and Challenges

Based on research, there are three major reasons/challenges for the topic:

1. Reading has been a problem for many U.S. school children.
   According to Lee, Grigg, & Donahue (2007), more than one-third of the 4th graders in the U.S. cannot complete their schoolwork successfully due to low reading levels. In order to read well, one needs to be equipped with essential skills to sound out words and understand how each vocabulary word is formed. Vocabulary and reading comprehension are highly correlated (Ouellette & Beers, 2009) because poor comprehenders often demonstrate vocabulary deficits (Nation, Cocksey, Taylor, & Bishop, 2010). Vocabulary deficits result from poor decoding skills (i.e. lack of phonological awareness). Phonological awareness skills can help readers break down a word into one or more syllables, break down each syllable into phonemes (phonemic awareness), and associate letters with phonemes (spelling, phonics). Therefore, classroom teachers do need to have sufficient and conscious content knowledge of the English language, so learners can be well instructed to acquire language skills. In addition, parents (home teachers) can be well coordinated with classroom teachers.

2. Practicing effective inclusion is still an issue in today’s education.
   Practicing effective inclusion is still an issue in today’s education due to immigration and the difficulties of dealing with children with disabilities including English language learners (Chen & Chen-Worley, 2015; Chen-Worley, 2023; Cook, Klein, & Chen, 2020).

   Many school teachers are not well trained in essential linguistics (Freeman & Freeman, 2014). Essential linguistics is the conscious content knowledge of the English language. In other words, it is what teachers need to know to teach reading, ESL, spelling, phonics and grammar according to Freeman and Freeman (2014). With is conscious content knowledge, learners can be well instructed to acquire language skills.
Theoretical Framework

The purpose of the paper is to demonstrate how foundational literacy skills, inclusion, and equity can be achieved through game-based learning activities. As previously stated, based on research, more than one-third of the 4th graders in the U.S. cannot complete their schoolwork successfully due to low reading levels (Lee, Grigg, & Donahue, 2007). In order to read well, one needs to be equipped with essential skills to sound out words and understand how each vocabulary word is formed. Vocabulary and reading comprehension are highly correlated (Ouellette & Beers, 2009) because poor comprehenders often demonstrate vocabulary deficits (Nation, Cocksey, Taylor, & Bishop, 2010). Vocabulary deficits result from poor decoding skills (i.e. lack of phonological awareness). Phonological awareness skills can help readers break down a word into one or more syllables, break down each syllable into phonemes (phonemic awareness), and associate letters with phonemes (spelling, phonics). Therefore, classroom teachers do need to have sufficient and conscious content knowledge of the English language, so learners can be well instructed to acquire language skills. In addition, parents (home teachers) can be well coordinated with classroom teachers.

In order to demonstrate how foundational literacy skills, inclusion, and equity can be achieved, three game-based learning activities will be introduced as examples. Foundational literacy skills include phonological awareness, phonics, and word knowledge which are the essential skills to master vocabulary skills – reading, spelling, and semantics. Teaching requires knowledge, experience, and understanding. Likewise, learning requires learners to experience and understand learning, so knowledge can be acquired. Learning-by-doing is one of the influential concepts that the prominent American philosopher and education reformer, John Dewey (1859-1952) emphasized (Williams, 2017). The concept of learning-by-doing is similar to hands-on learning, experiential learning, and kinesthetic learning which are supported by cognitive science and behavioral science (Radvansky, 2011). Since the learning-by-doing activities will be achieved through pair and group work (game-based), they are fun and engaging and promote social learning at the same time. In the game-based learning activities, learners not only can interact with everyone in the group both verbally and nonverbally but also can inquire and reflect on their own learning. Accordingly, learning takes place in the inclusive social setting with low affective filter (in a non-threatening learning environment) without feeling embarrassed or discriminated (Krashen, 1985).

Hands-on Activities

Three game-based learning activities will be introduced. The 1st activity is vocabulary learning associated with phonological awareness, phonics, and semantics. Every participant will have a chance to practice phonological awareness, phonics, and semantics as a teacher and a learner. The 2nd activity is a vocabulary learning reinforcement game by using pair and group work. All participants will be divided into two groups and stand in two lines. It means that every participant will have a chance to move to each position to become a teacher and a learner and practice all the vocabulary words that just learned in the 1st activity. Every participant also practices vocabulary words and sentence structures by asking questions and answering questions. The 3rd activity is a second vocabulary learning reinforcement activity by using a dynamic game.
All participants will sit in a circle and the game rules will be announced during the activity. The 4th activity with a focus on the writing skill can also be introduced if time permits.

**Activity 1: Phonological awareness, phonics, and semantics (word knowledge)**

In this activity, flash cards and real objects are used to teach vocabulary words associated with knowledge (sound-object association), phonological awareness (syllable, phonemes, phonics). Every participant will have a chance to practice phonological awareness, phonics, and semantics as a teacher and a learner. The following is an example of using a flash card to a vocabulary word, “watermelon.”

![Flash Card Example](image)

**Activity 2: Vocabulary reinforcement game 1 (guessing game)**

The 2nd activity is a vocabulary learning reinforcement game by using pair and group work. All participants will be divided into two groups and stand in two lines. Every participant will have a chance to move to each position to become a teacher and a learner and practice all the vocabulary words that just learned in the 1st activity. Every participant also practices vocabulary words and sentence structures by asking questions and answering questions. Details will be demonstrated at the conference.

CT: Classroom Teacher as a facilitator and monitor

Teacher line: \[ T \rightarrow T \rightarrow T \rightarrow T \]

Student line: \[ S \leftarrow S \leftarrow S \leftarrow S \]

**Activity 3: Vocabulary reinforcement game 2 (identity check)**

The 3rd activity is a second vocabulary learning reinforcement activity by using a dynamic game. All participants will sit in a circle and the details will be demonstrated during the activity.

Everyone has a different fruit name from the lesson.
Everyone needs to teach the fruit name in the flash card.
Everyone takes turns and repeats the fruit name a couple of times.
The game begins. At the beginning, the teacher is the policeman and asks the students to give a fruit name…
Conclusion

The 1st activity promotes the foundational skills necessary to build vocabulary skills. The 2nd activity builds upon the 1st activity and reinforces vocabulary learning and the understanding of sentence structures. The 3rd activity reinforces the vocabulary learning for the first two activities. It helps children who cannot sit still move around and learn at the same time. It enhances fine and gross motor skills, attention, memory, listening, speaking, reading, and writing as well.

Research study

The activities can be considered as an example of intervention strategies for promoting foundational literacy skills. The pretest can be conducted before the intervention strategies are applied. The post-tests can be conducted after three months’ and six months’ interventions.

References


