

The Impact of Narrative Storyline Complexity on EFL Learners' Oral Performance

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Abstract

The present study aims at investigating the effects of narrative complexity of storyline (presence of simultaneous events) on EFL learners' oral performance, as displayed by its complexity, fluency, and accuracy. Forty-two Iranian learners of English with two different proficiency levels performed two narrative tasks (with or without background events) based on two picture stories. The performances, then, were recorded, transcribed, and coded to measure the complexity, fluency, and accuracy of the participants' performances. Next, the matched t-test was employed to analyze the collected data. The results indicated that syntactic complexity of performance was related to the storyline complexity, i.e. for both groups, more syntactic complexity was associated with the narrative that had both foreground and background storylines. Storyline complexity also helped high-proficiency learners to perform more fluently. In neither group did storyline complexity have a significant effect on accuracy. Findings have pedagogical implications for the field of syllabus design.

Keywords: Task-based language teaching, Storyline complexity, Complexity, Fluency, Accuracy

1. Introduction

In recent years, a number of researchers, syllabus designers, and educational innovators have called for a move in language teaching towards task-based approaches (Prabhu, 1987; Nunan, 1989; Long and Crooks, 1992; Crooks and Gass, 1993a, 1993b; Ellis, 2003; Samuda and Bygate, 2008). Indeed, task-based approaches to second language pedagogy have generated a great deal of interest among language researchers and syllabus designers. Research into task-based language teaching has mostly concentrated on investigating task design and performance conditions and the effects they have on language performance (Bygate, 2001; Gilabert, 2005; Rahimpour, 1997; Robinson, 2005; Skehan and Foster, 1997, 1999; Tavakoli and Skehan, 2005; Tavakoli and Foster, 2008).

Storyline complexity is an important feature of narratives which has not been fully investigated in the context of research relating to the design of oral narrative tasks. As a consequence, the present paper investigates the effect of storyline complexity on L2 narrative oral production of learners from different proficiency levels.

2. Storyline Complexity

The variable which was studied in this research was narrative complexity of storyline. Studies investigating the effect of storyline complexity on oral performance include Tavakoli and Foster (2008), in instructional settings, and Tavakoli (2009), in a language testing context. These studies addressed the question of whether language performance in tasks with both foreground and background events was syntactically more complex than that in tasks with only a foreground storyline. Fluency and accuracy were not investigated in these studies, however. Although the researchers did not include different proficiency levels of learners in their studies, they found out that the learners generally produced more complex language during the complex narrative task with two storylines than the simple narrative task with only a single storyline. Foster and Tavakoli (2009) added a native-speaker dimension to the nonnative speaker study reported by Tavakoli and Foster (2008) and showed that native speakers were also prompted by storyline complexity to use more complex language.

According to Tavakoli and Foster (2008), storyline complexity refers to “whether a narrative has background as well as foreground events, with a narrative consisting of only foreground events classified as less complex than one with both”. Tavakoli and Foster (2008) state that the consideration of “foreground and background” information as a significant characteristic of narratives is not new (Bardovi-Harlig, 1992, 1998; Dry, 1983; Hooper and Thompson, 1980; Polanyi-Bowditch, 1976; Reinhart, 1984; Tomlin, 1984; von Stutterheim, 1991). Foregrounded events have been described in the literature as those that generally move time forward, supply the main points of discourse (such as in a narrative), and are more important or central to the development of the overall discourse theme, whereas background elements have been defined as those that merely assist, amplify, explain, evaluate, or elaborate on the events in the foreground. Tavakoli and Foster (2008) further argue that a narrative in which there are only foreground events asks less of the story teller than one in which background events need to be incorporated, presumably at moments at which some kind of elaboration or explanation is required before the main foreground story can be moved on.

3. Cognitive Approaches to Language Learning

According to Skehan (1998), language production is distinguished by three dimensions: Fluency, accuracy, and complexity. As Skehan (1998) points out, each one of these three dimensions draw on different subsystems of language system. Fluency requires learner to engage in a semantic rather than syntactic processing, and consequently, to draw on his/her memory-based system, accessing and deploying ready-made chunks, and employing communication strategies to get by communication problems. On the contrary, accuracy and especially complexity require learner to engage in a syntactic processing, and thus to draw on rule-based systems. Skehan (1998) also believes that there are likely to be trade-offs as a learner struggles to conceptualize, formulate, and articulate messages. Thus, learners vary in the extent to which they adhere to each one of these three aspects of language production. Some tasks demand or attract learners' attention to accuracy, some to fluency, and yet some others to complexity. Attention to one dimension is likely to be at the expense of others. Skehan's model of L2 performance has, however, been challenged by Robinson (2001, 2003, 2005). Robinson (2001), drawing on more recent work in psychology (Neumann, 1996), concluded that human attention is not limited, and he proposed a model of attention in which language learners are able to access multiple attentional pools that are not in competition. As depletion of attention in one pool has no effect on the amount remaining in another, language learners can prioritize both form *and* meaning and both accuracy *and* complexity.

4. The Study

4.1 Research Question

What is the effect of narrative storyline complexity (presence of simultaneous events) on oral performance of EFL learners from different proficiency levels, as displayed by its complexity, fluency, and accuracy?

4.2 Research Hypothesis

Narrative storyline complexity (presence of simultaneous events) has significant effect on oral performance of EFL learners from different proficiency levels, as displayed by its complexity, fluency, and accuracy.

4.3 Participants

The participants of this study were 42 EFL learners, both males and females. They were studying English at a language institute in Tabriz, Iran, and were aged between 16 and 24. The participants had Azari as a mother tongue and all were in classrooms where listening and speaking activities were common and where they were not allowed to use Azari or Persian. The only contact they had with English outside the classroom was at school or university. The participants were of two levels of proficiency (low vs. high). The first group, low-proficiency level, consisted of learners who were exposed to English for at most two successive years in private English institutes and had passed previous terms with an average of over 70 out of 100. The second group, high-proficiency level, consisted of learners who were exposed to English for at least 5 successive years in private English institutes and had passed previous

terms with an average of over 70 out of 100.

4.4 Tasks

The current study used a total number of two oral narrative tasks, each comprising six cartoon frames. Among different types of pedagogic tasks, narrative tasks are the most frequent ones referred to in the literature (Skehan and Foster, 1999; Tavakoli and Skehan, 2005; Tavakoli and Foster, 2008). Narrative tasks as stated by Tavakoli and Skehan (2005) “refer to short stories based on a sequenced set of picture prompts which, with the purpose of eliciting oral language performance, are shown to the participants while they are asked to narrate the story”. The tasks used in this study were identical to the ones used in Tavakoli and Foster (2008). These two tasks are from Heaton (1966).

The difference between the two tasks was in the number of storylines. The narrative with one storyline (*Football*) contained only foreground information (see Appendix 1), whereas narrative with two storylines (*Picnic*) contained both foreground and background information (see Appendix 2). *Picnic* task was considered a more complex task compared to *Football* task because it required the learners to incorporate background events, presumably at moments at which some kind of elaboration or explanation was required before the main foreground story could be moved on.

4.5 Procedures

In the current study, storyline complexity was a within-participant variable, that is, each participant performed two tasks (with or without background events). In order to avoid any practice effect, a counterbalanced design in which the participants performed the two tasks in different sequences was adopted.

In order to collect data, the participants met individually with one of the researchers in a quiet room. The necessary instructions on how to perform the tasks were given to them completely. They were told that they would be recorded while retelling stories in English from cartoon prompts. Moreover, it was emphasized that the recordings would be anonymous, and that this was not a test. Apart from age and first language (L1) background, no personal information was sought. They were allowed to quit if they weren't willing to participate. In order to avoid any misunderstanding, all this information was given in Persian.

The participants were asked to look over the first cartoon story for up to 3 min to check that they understood its contents and plan for what to say and how to narrate the story to the researcher. They were asked to retell it, as if to someone who could not see the pictures. After that, they had 3-4 min to tell the story. Their performance was recorded. The same process was repeated for the second story.

A SONY mp3 recorder/player and a NOKIA mobile phone (6120) were exploited for recording the learners' oral performance. Both gadgets were used at the same time to avoid the probable loss of data.

4.6 Measures

4.6.1 Complexity Measure (Syntactic Complexity)

The syntactic complexity of each performance was measured by finding the ratio of clauses to T-units (Yuan and Ellis, 2003).

4.6.2 Fluency Measure (Number of Words per Minute)

Fluency was measured by calculating the number of words per minute (Skehan and Foster, 1999).

4.6.3 Accuracy Measure (Error-Free Clauses)

Accuracy was measured by finding the percentage of error-free clauses to the whole number of clauses (Mehnert, 1998; Tavakoli, 2009; Tavakoli and Foster, 2008).

5. Results

As mentioned in section 4.6, ‘complexity’ was measured by finding the ratio of clauses to T-units (Yuan and Ellis, 2003), while ‘fluency’ was achieved by calculating the number of words per minute (Skehan and Foster, 1999), and ‘accuracy’ was measured by finding the percentage of error-free clauses to the whole number of clauses (Mehnert, 1998; Tavakoli, 2009; Tavakoli and Foster, 2008). The raw scores of the participants were, then, fed into the computer software SPSS for statistical analysis. Next, the matched t-test was adopted to determine the impact of narrative complexity of storyline on the participants’ oral performance in terms of complexity, fluency, and accuracy.

Table 1. Descriptive statistics for low-proficient learners’ oral narratives

Measure	Number of Storylines	Mean	N	Std. Deviation
Complexity	Single-Storyline (-Back)	1.4479	21	.18162
Complexity	Dual-Storyline (+Back)	1.8554	21	.29046
Fluency	Single-Storyline (-Back)	89.1443	21	18.89273
Fluency	Dual-Storyline (+Back)	93.2406	21	20.92487
Accuracy	Single-Storyline (-Back)	48.7011	21	20.91230
Accuracy	Dual-Storyline (+Back)	56.3791	21	17.42327

Table 1 shows the descriptive statistics for complexity, fluency, and accuracy in single-storyline task versus dual-storyline task for the low-proficient learners. As can be seen, the mean of complexity, fluency, and accuracy in dual-storyline task is greater than that in single-storyline task ($1.8554 > 1.4479$; $93.2406 > 89.1443$; $56.3791 > 48.7011$).

Table 2. Matched t-tests for low-proficient learners' oral narratives

		Paired Differences		Observed t	df	Sig. (2-tailed)
		Mean	Std. Deviation			
Complexity	–Back	-.40754	.28642	-6.520	20	.000
	+Back					
Fluency	–Back	-4.09630	15.69973	-1.196	20	.246
	+Back					
Accuracy	–Back	-7.67791	18.26554	-1.926	20	.068
	+Back					

Table 2 displays the results of matched t-tests for complexity, fluency, and accuracy in single-storyline task versus dual-storyline task for the low-proficient learners. As the table shows, since the significance level of matched t-tests in case of accuracy and fluency of oral narratives are higher than .05 (significance level $p < .05$), storyline complexity had no significant effect on accuracy, and also fluency of oral narratives. However, the result of matched t-test shows that there is a statistically significant difference between the complexity of oral narratives in single-storyline task and dual-storyline task. The significance level of matched t-test, regarding complexity, is .000. Since .000 is lower than .05, there is a statistically significant difference between the complexity of oral narratives in single-storyline task and dual-storyline task; performance in the task that contained two storylines, i.e. both foreground and background, was statistically more complex than performance in the task which had only a foreground storyline.

Table 3. Descriptive statistics for high-proficient learners' oral narratives

Measure	Number of Storylines	Mean	N	Std. Deviation
Complexity	Single-Storyline (-Back)	1.6720	21	.35760
Complexity	Dual-Storyline (+Back)	2.0729	21	.49269
Fluency	Single-Storyline (-Back)	113.26	21	27.62990
Fluency	Dual-Storyline (+Back)	123.22	21	25.89678
Accuracy	Single-Storyline (-Back)	71.4614	21	18.48723
Accuracy	Dual-Storyline (+Back)	75.7842	21	15.85963

Table 3 indicates the descriptive statistics for complexity, fluency, and accuracy in

single-storyline task versus dual-storyline task for the high-proficient learners. It can be observed that the mean of complexity, fluency, and accuracy in dual-storyline task is greater than that in single-storyline task ($2.0729 > 1.6720$; $123.22 > 113.26$; $75.7842 > 71.4614$).

Table 4. Matched t-tests for high-proficient learners' oral narratives

		Paired Differences		Observed t	df	Sig. (2-tailed)
		Mean	Std. Deviation			
Complexity	–Back	-.40093	.64093	-2.867	20	.010
	+Back					
Fluency	–Back	-9.96213	14.62797	-3.121	20	.005
	+Back					
Accuracy	–Back	-4.32278	14.36464	-1.379	20	.183
	+Back					

Table 4 shows the results of matched t-tests for complexity, fluency, and accuracy in single-storyline task versus dual-storyline task for the high-proficient learners. The result of matched t-test shows that there is not a statistically significant difference between the accuracy of oral narratives in single-storyline task and dual-storyline task. The significance level of matched t-test, regarding accuracy, equals .183 which is higher than .05. However, since the significance level of matched t-tests in case of fluency and complexity of oral narratives are lower than .05, storyline complexity had significant effect on fluency and also complexity of oral narratives; in the *Picnic* task which does have background events, high-proficient learners produced significantly more fluent and more complex language.

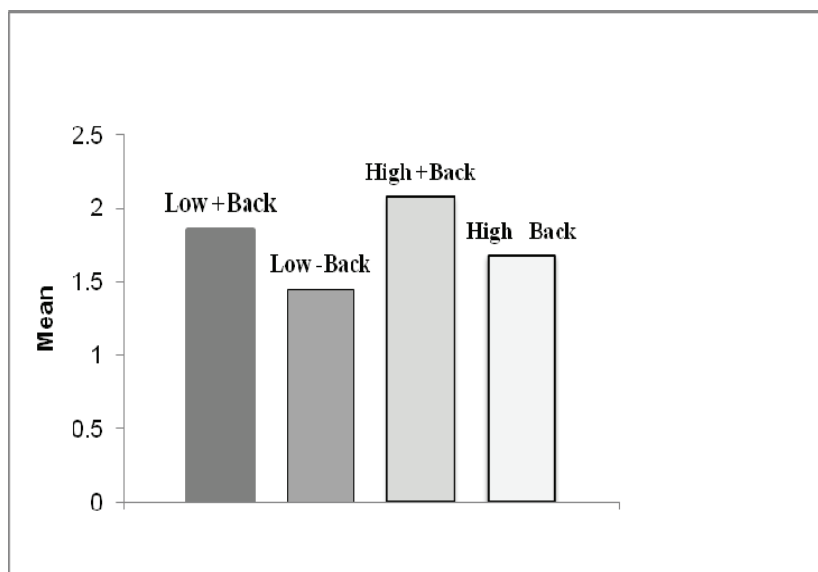


Figure 1. A Comparison of the Means for Complexity of Oral Performance

Figure 1 illustrates the means of complexity of oral narratives in single-storyline task (-Back) versus dual-storyline task (+Back) for both proficiency groups. As the figure shows, regardless of the proficiency level, the mean of the complexity of the performances of the dual-storyline task is more than that of the single-storyline task and this difference is statistically significant.

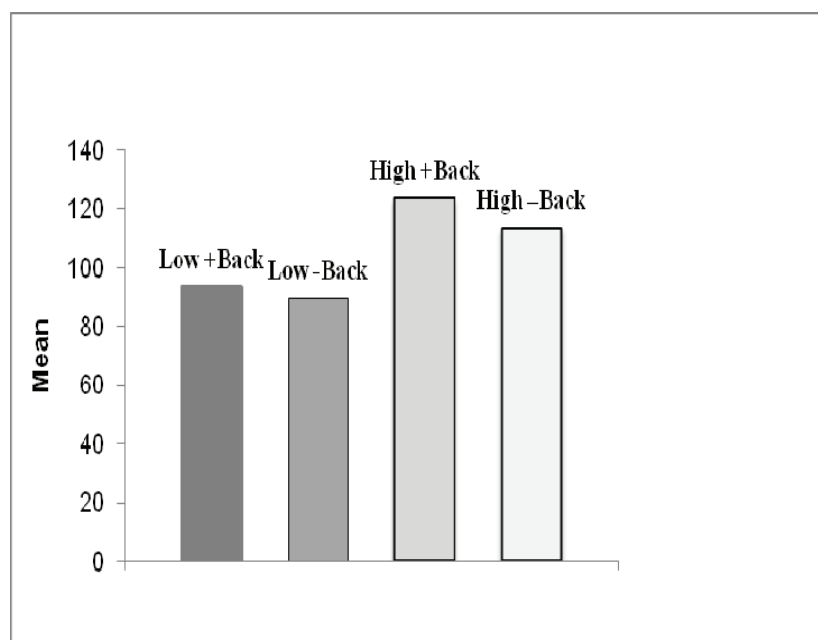


Figure 2. A Comparison of the Means for Fluency of Oral Performance

Figure 2 delineates the means of fluency of oral narratives in single-storyline task (-Back) versus dual-storyline task (+Back) for the two proficiency levels. As the figure shows, the mean of the fluency of the performance is greater for the dual-storyline task. However, among the low group learners, this gain is not so big to be statistically significant.

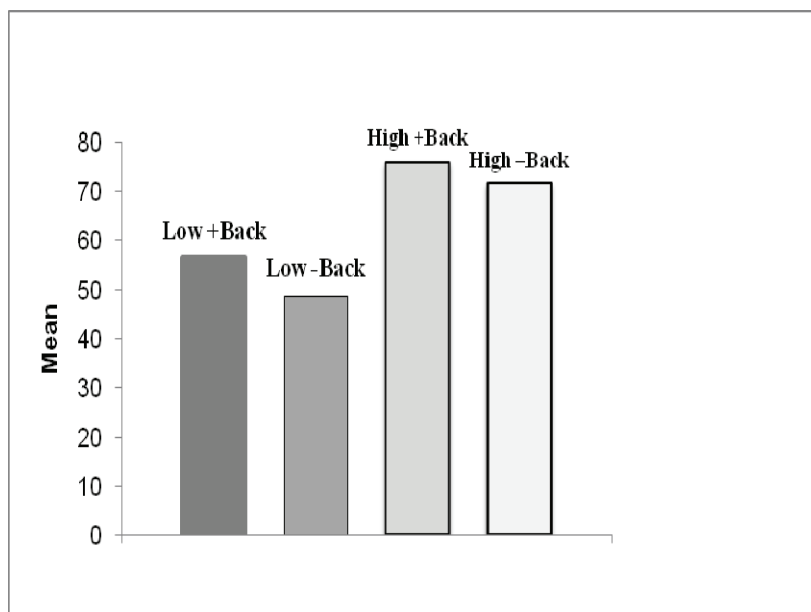


Figure 3. A Comparison of the Means for Accuracy of Oral Performance

Figure 3 displays the means for accuracy of oral performance in single-storyline task (-Back) versus dual-storyline task (+Back) for both proficiency groups. As shown in the figure, regardless of the proficiency level, the mean of the accuracy of the performances of the dual-storyline task is more than that of the single-storyline task. However, this gain is not big enough to be justified statistically.

6. Discussion

6.1 Complexity

Like the research by Tavakoli, 2009; Tavakoli and Foster, 2008, the results of this study indicated that storyline complexity enhances syntactic complexity; in the *Picnic* task which does have background events (complex task), both proficiency groups produced significantly more complex language. One possible explanation for these findings is provided by Tavakoli (2009). She accounted for this effect by suggesting that “presence of a background storyline in a picture story would stimulate the speakers to employ more subordination in their performances to fulfill the functional requirements of the task. It appears that in performing a task which presents two storylines, i.e. both foreground and background, the speaker needs to use more complex language to show the events occurring in the foreground, relate them to the stories happening in the background and describe the relationship between the two. This is in line with the findings of Matthiessen and Thompson (1988) who noted that, in English, subordinate clauses are used to signal a condition, purpose, reason, cause or manner. Harries and Bates (1992) have also argued that use of subordination becomes more frequent when background information and events are being described in a narrative and are to be weaved into the main events in the foreground”. A second potential explanation is provided by Skehan and Foster (1999) that more complex tasks direct the learners’ attention to content and divert their attention away from form.

6.2 Fluency

The results of matched t-tests showed that fluency of low-proficiency learners' oral performance was not affected significantly by storyline complexity. Quite the reverse, the results indicated a statistically significant effect of storyline complexity on fluency of high-proficiency learners' oral performance. The narrative task for which the storyline contained background as well as foreground information resulted in high-proficiency learners attempting significantly more fluent language. The results are in line with Skehan and Foster's (2001, p.193) proposition that "prioritization or predisposition (or both) seem to orient performance towards one (or two) of the three areas [accuracy, fluency, and complexity] theorized to be important, with the result that the other(s) suffers."

6.3 Accuracy

The present study found no impact of storyline complexity on the accuracy of performance. Although learners in both proficiency groups performed better in complex task, concerning accuracy, the difference failed to reach significance. The results are justifiable by Skehan's (1998) limited-resource model. In this model, Skehan proposes that if a task demands a great amount of attention in terms of its content (as it might if two storylines were going on at the same time), then attention to language form is diminished. The obtained result is also in line with VanPatten's (1990) proposition that when learners are free to allocate attention, they prioritize give attention to the content over concern for the form.

7. Pedagogical Implications

One of the major issues regarding task-based language teaching and learning is to find out how the demands of the task being carried out affect the allocation of a language learner's limited attentional resources and impact on language performance, as displayed by its accuracy, fluency, and complexity and how a balance can be established between these performance areas. Thus, the findings of the current study make it possible for a teacher or a syllabus designer to design sequences of instructional activities that alternate attention to each of the areas so that the goal of balanced development can be obtained. Also, the issue of establishing valid criteria for grading and sequencing tasks has been a major challenge for those concerned with task-based language teaching and syllabus design (Long and Crooks, 1992; Robinson, 2003, 2006). In Skehan's view (1998; Skehan and Foster, 2001), both task manipulation and sequencing for syllabus design should be based not just on intuitions about difficulty but on empirical findings. Therefore, the findings of the current study can be used as an empirical basis for selecting, grading and sequencing tasks within task-based syllabi and testing. Additionally, the findings of the present study suggest that teachers should consider learner proficiency as an individual learner factor when making a decision on appropriate task difficulty.

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Appendix

Appendix 1. Picture Story 1 (Single-Storyline Task)

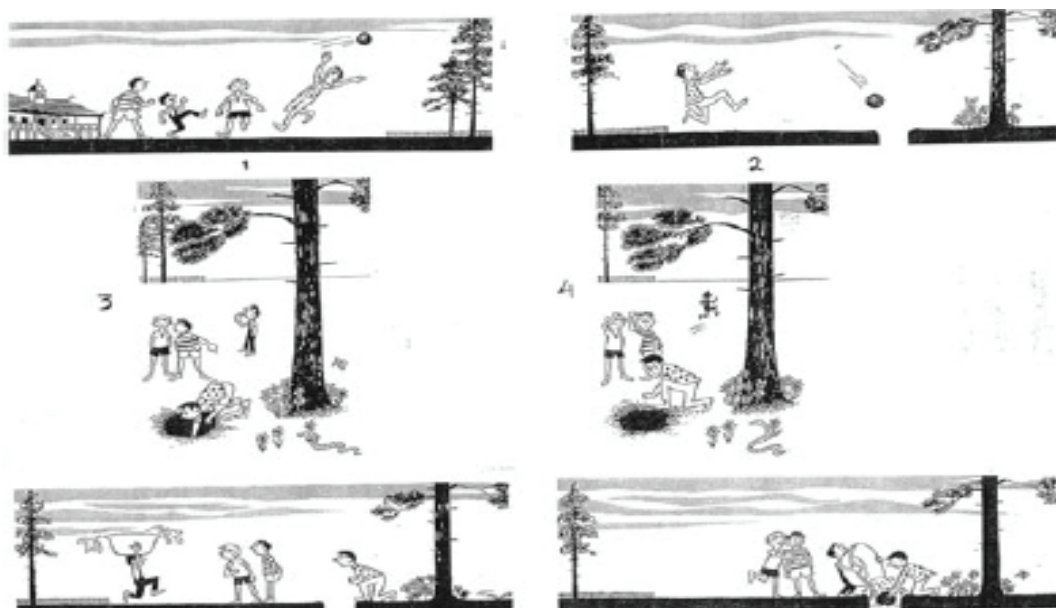


Figure A1. Football Task, Heaton, 1966.

Appendix 2. Picture Story 2 (Dual-Storyline Task)

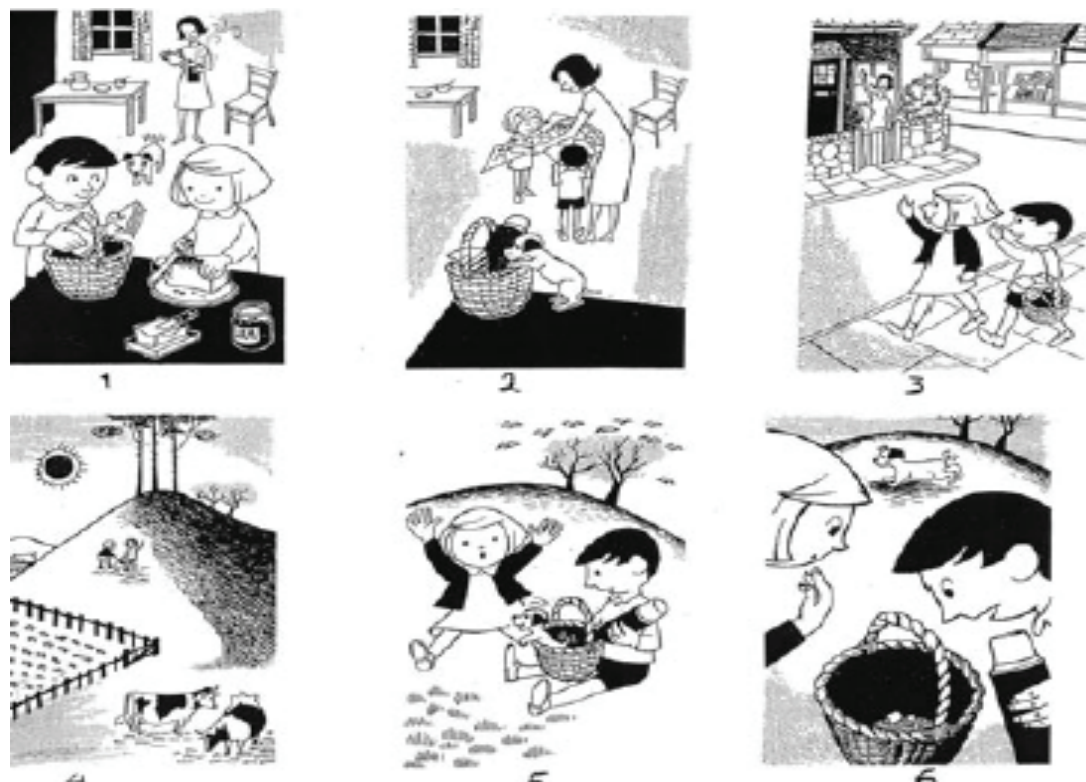


Figure A2. Picnic Task, Heaton, 1966.