Narrative Intelligence and Learning Languages

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Abstract—The purpose of this study was to examine if there is any relationship between NI (narrative intelligence) and language learning. To this aim, 110 high school students participated in this study. The participants were asked to tell the story of their first day of the New Year (task 1) and look at a comic strip picture and construct its story orally (task 2). The interviews were recorded and later transcribed. The Narrative Intelligence Scale (NIS) was used to score the narratives. The results of the study showed that there are significant correlations among students’ NI scores and English, Farsi, and Arabic achievements. Moreover, results from Step-wise Regression Analysis revealed that the narration (one of the sub-capabilities of NI) is significantly predictive of language scores. The findings are important to educators as they may offer insights into improving students’ narrative skills.

Index Terms—Arabic achievement, correlation, English achievement, Farsi achievement narrative intelligence, regression

I. INTRODUCTION

Narrative intelligence (NI) is defined as “the capacity both to formulate (compose, narrate) and to follow (understand, read) the story of our own life” [1, p. 13]. As Randall argued, numerous processes which are crucial for the existence of human being, depends critically on NI [1]. Intelligence is not a single construct; rather, Gardner [2] believed in multiple intelligences; hence, he identified eight intelligences. Likewise, Goleman [3] proposed that human beings are endowed with “emotional intelligence”. Then, Bruner [4] suggested that people possess another kind of intelligence, called NI.

Generally, narrative is an account of a sequence of events that happens to someone under particular circumstances [4]. Bruner believed that narrative is the basic way of meaning making through which meaning is represented and communicated. Also, stories play a central role in organizing human experiences and how they make sense of them. Parents transfer their culture, and morals through narratives. [5] argued that stories are fundamental tools for the development of ‘social self’ in individuals. Moreover, she discussed that basic parts of human memory constitute stories of our own experiences and experiences of others.

Narrative ability has been related to academic success [6]. In earlier stages of education, learning basic skills such as reading, and writing depends heavily on narrative skill which guarantees further academic success or creates later problems if students have problems in this skill [7]. The importance of narrative skill in language learning has also been emphasized [8] and incorporated in language learning activities [9]. However, to the best knowledge of the present researchers, no study has been conducted to find the relationship between NI and language learning. Given the central role that NI plays in language education, the present study aims to find the relationship between NI and language achievement.

II. THEORETICAL BACKGROUND

A. Narrative Intelligence

Randall [1] identified five intertwining sub-capabilities for NI. They are emplotment, characterization, narration, generation, and thematization which are automatically incorporated in constructing our version of an event. The first component of NI is emplotment. It is editing what is happening or what has happened through our senses, shortening an event, handling what is recognized as ‘conflict’ or ‘trouble’, prioritizing what seems to be relevant from irrelevant in the situation to fulfill the present aim of the narrator, perceiving the whole elements of an event as interrelated entities, linking elements as one the cause of the other and not one happens after the other, being able to construct what is missing in the situation from the present cues, and finally viewing an event from different angles. The second sub-capacity of NI is characterization. To sum up, to characterize is to make a ‘working picture’ of ourselves and others based on existing and evolving evidences.

Narration is the third component which, according to Randall, is the heart of NI. By narrating a person “conveys to others what is going on, has gone, or may go on, sensitive to what they understand in terms of ‘logical’ between events, causes, consequences, etc.”[1, p. 17]. Narration requires one to choose elements of grammar, vocabulary, rhetoric, and intonation which are linguistically suitable for the context of the narrative. A good narrative is the one that keeps the listener interested to the rest of the story by presenting the story in a rather novel way and not by imitating other peoples’ style, integrating the beginning, middle and the end of the
story in a way that it captures the central action, satisfying the
taste of the audience, and providing neither too little nor too
much detail.

Generation is the fourth component of NI. It is the ability to
arrange the event in rather expected patterns (tragic, comic,
ironic, etc.). This is true for both narrating and experiencing the
events. A good narrative is the one in which a certain tone
(optimism, pessimism, realism) is maintained, and the narrator
can feel and convey whether the characters (including the
narrator) of the story are in a good mood or a bad mood.
Generation also includes the ability to mention if an event in
a story makes the life of the characters harder or easier. Finally,
thematization is the ability to recognize the main ideas of the
story from repeated happenings in the event, and to provide
explanations about why something has happened several times.

B. Research in Narrative Intelligence

"One of the central aspects of NI work is its inherent
interdisciplinarity. If narrative is indeed, as many argue, a
fundamental organizing principle of human experience, then it
is unsurprising that many different fields have an interest in
narrative" [10, p.1]. Perhaps the only field of study that has
worked on NI itself, and the application of NI properties in the
field is Artificial Intelligence. This can be related to the nature
of the field, and the fact that the term NI was first born [10] in
this area. Other areas, such as education, have mostly focused
on not directly on NI but narrative skill, or the application of
narrative for teaching different school subjects.

In Artificial Intelligence, one of the main issues in designing
agents has being making more human like systems. According
to [5] NI is one of the most important parts of human
intelligence. Therefore, to make more human like agents, this
component of human intelligence should serve as a model for
artificial systems. More specifically, human being is able to tell
and comprehend stories. This ability enables them to
communicate effectively. Therefore, AI researchers (see for
example, Mateas&Sengers [1]; Winkel, [11]) have been seeing to apply NI properties into AI filed to make systems
whose actions are comprehensible to human.

In the area of education, research on NI can be divided into
three main areas. Firstly, narrative has been used to better
understand the nature of learning. For example, learners' personal narratives were first introduced in the field of applied linguistics to determine factors that influence language learning process. Later, narrative was studied to identify the way learners experienced learning a language and how they made sense of it. These investigations questioned viewing learners without considering their feelings [12, cited in 13] and their race, gender and class—factors that affect the way learners are positioned in the ESL context [14].

Secondly, narratives have been employed in teaching various
school subjects. The purpose has been to activate students' NI
by creating narrative-centered-learning environments. Although
narrative is traditionally applied in literature and art classes,
other disciplines such as mathematics, sciences, social studies
and language have attempted to embed narrative elements in
designing class activities. In such cases, the aim has been to
enable students to employ their NI in constructing knowledge.
In math education, for example, a plethora of research supports
the contribution of narratives, and demonstrated how to use
narrative knowledge to create narrative learning environment to
direct learners attention from tedious process of problem
solving to analyzing real world problems [6; 15].

In the field of second/foreign language education, Ang and
Zaphiris [9] integrated narrative in a game play to be used in
language classes. They discussed that employing narrative-
centered computer games in learning is in line with constructivism of Piaget in which "knowledge is constructed
instead of being transmitted" (p. 1373). In a similar vein,
Johnson [16] designed a system called Tactical Language and
Culture Training System (TLCTS). TLCTS is a computer game
which is intended to develop learners' verbal and non-
verbal skills and cultural knowledge. In a different study,
Stakhnevich [8] emphasized the importance of developing NI in language classes by exploring the reason why some second language
learners were more successful in involving the audience when
they tell their stories. She argued that these are not the stories
themselves but following the rules of storytelling that makes
the narrators successful in attracting the audience. She
suggested that narrative skill can be empowered by the analysis
of good stories, clear explanations of storytelling strategies
employed by the professional narrators, and practicing them in
class.

C. Purpose of the Study

Having reviewed the literature regarding NI, the researchers
realized the need for more work in the field of second/foreign
language learning. Therefore, this study intends to investigate
the relationship between NI and language achievement.
Therefore, the following questions were posed:

1) Are there any significant relationships among NI and
English, Farsi, and Arabic achievements?
2) Among the five sub-capabilities of NI, which one(s) is (are)
the best predictor(s) of English, Farsi, and Arabic
achievements?

III. METHOD

A. Participants and Setting

In this study 110 Iranian female students took part. They were
all third grade high school students from five schools located
in different parts of Mashhad, a city in Iran. Students' age
ranged from 17 to 18. The students who participated in this
study spoke Persian as their mother tongue. It has to be
mentioned that, at schools, English and Arabic are taught as
foreign languages and Farsi (or Persian) is the students' native
language.
B. Instrumentation

NIS Scale

The researchers used the Narrative Intelligence Scale (NIS), developed by Pishghadam, Baghaei, Shams, and Shamsaei [17] to measure students’ NI. As Pishghadam et al. (2011) stated the scale measures NI via scores obtained on 35 items ranging from 1 to 5 scores. Content validity was established by designing the scale based on Randall’s framework [1] of NI. To ensure construct validity, the researchers employed Rash model. The result of Rash analysis demonstrated that except for six items, all items represent a unidimensional construct. The results of reliability analysis exhibited that the item reliability of .99 and the person reliability of .98. In this study, the total reliability of the scale, estimated via Cronbach’ alpha, was 0.98.

Tasks

The subjects were asked to complete two tasks:

Task 1: a picture (Appendix B) was given to the students and they were asked to look at the picture for a minute, then the picture was taken and they were required to tell the story in Persian.

Task 2: the prompt “please tell the story of your first day of the New Year” was used to elicit students’ memory of this memorable day. This task was chosen for some reasons: first, the chance to remember the memory was high due to the closeness of time between the New Year and the time of the interview (a month). Second, the event is common and almost equally important for all the Iranians. Third, all participants share almost the same customs regarding the first day of the New Year; therefore, what to say by the subjects were almost predictable and there remained almost how to say the story.

Subjects’ Grades on English, Farsi, and Arabic Exam

Students’ final grades were taken from schools. It is worth mentioning that final exams for third grade students of high school are supposed to be standard and nationally uniform and papers are subject to blind correction by teachers other than those of students.

C. Procedure

The data was collected in the spring of 2011 over a period of two month. The researchers met each volunteer student individually; they told their narratives (task 1 and 2) which were recorded and later transcribed by the researchers. The narratives were rated using NIS. In order to analyze the data, the researchers used SPSS 16 program. To find whether there were any correlations among NI and English, Farsi, and Arabic achievements Pearson product-moment correlation was run. Partial correlation was employed to reveal which subscale of NI correlated with the English, Farsi, and Arabic achievements. Finally, using step-wise regression, the researchers tried to find out which component of NI best predict students’ achievements in English, Farsi, and Arabic languages.

IV. RESULTS

The results of correlation for the relationship among students’ NI score and their English, Farsi and Arabic language achievements.

Prediction of English achievement by NI factors

To further analyze the data, the researchers conducted the regression analysis with a Stepwise method. The results reveal which subscales of NI are important in predicting English language achievement. Narration was the best predictor for English achievement (Adjusted $R^2$ 0.11, $p < .05$), indicating that students who scored high in narration performed better in their English exam. (see table 2).

Prediction of Farsi Achievement by NI Factors

As table 3 shows, out of the five subscales of NI, Narration accounts for about 0.09% ($p < .05$) of the variance in Farsi language achievement. Having high Narration, was the best predictor of Farsi achievement.

Prediction of Arabic achievement by NI factors

To investigate which component of NI might have more predictive power in predicting learners’ Arabic achievement, a stepwise regression analysis was run. As table 4 illustrates, one subscale of NI – Narration - was found to be positive predictor of the dependent variable (Arabic achievement). It indicates that about 14% ($p < .05$) of the variation in learners’ Arabic achievement can be explained by taking their Narration into account (See Table 4).
IV. DISCUSSION

This research sought to determine, in the first place, if there was any relationship between NI and English, Farsi, and Arabic achievements, in the context of high schools of Iran. The second question concerned the most predictive sub-capability of NI in learning the aforementioned languages.

As far as the first research question is concerned, the present study indicated that there are significant relationships among NI and learners’ English, Farsi, and Arabic outcomes. This finding is supported by the plethora of previous studies which suggested that narrative skills play a crucial role in academic achievement in general [18, 6, 19, 20], and one or more school subjects in particular. For example, [21] found a relationship between narrative skill and reading ability. Likewise, [22] suggested that students who performed better on narrative tasks also had better performances on memory tasks.

With regard to the second research question, out of five subcomponent of NI, namely, employment, characterization, narration, genre-ation, and thematization, only narration was the best predictor for achievement, indicating that students who scored higher in their narration received higher grades on the final exam. Narration explained 11% of the variances in English achievement, 9% in Farsi achievement, and 14% in Arabic achievement. Consequently, it seems that narration is the most important sub-capabilities, compared to the other four subscales, in learning a language, in the context of high schools in Iran. The results of the study can be explained from linguistic, psycholinguistic, and sociolinguistic points of view.

From the linguistic point of view, the obtained result is not surprising if we consider the manifestations of narration in a narrative on the one hand, and the context of language teaching and learning in Iranian high schools on the other hand. As it was mentioned in the literature review, narration is the most important sub-ability of NI. Choosing appropriate grammar, vocabulary, rhetoric, and intonation for the linguistic context of narration is one important manifestation of narration. On the other hand, the focus of first and second language teaching and learning, in the secondary schools of Iran, is on teaching grammar, vocabulary, and pronunciation. The prominence given to linguistic competence of the learners in language teaching and learning is confirmed by [23, 24] Consequently, in order to be successful in language learning, in the formal language education of Iran, one has to master the structure of language. Therefore, we expected to find relationships among the narration sub-capacity and language achievement. The interrelation between narrative language abilities and linguistic competence is also confirmed by [25].

Narration is also manifested in the ability to provide neither too much nor too little information in a narrative. Observing this feature of a good narrative is a sign of correct behaviour, on the part of Iranian students. From the psychological point of view, most Iranian learners are perfectionist [26] and their perfectionism is reflected in their verbal behavior. Generally, correct behavior is valued among Iranians. In formal contexts, like schools, everyone is expected to follow some rather strict rules and standard behaviors, especially when the relation is from a low position to a high one. Students’ verbal behavior will be regulated, and it would have consequences for them if they do not follow standards. It seems that Iranians, including students, are still looking for "the best" and "the perfect". Looking for standards, "the best" and "the perfect" are features of modernism and as [27] claimed the ideas of modernism are dominant in Iran.

The obtained result can also be explained in light of sociological theory, i.e., face theory of Goffman [28]. He identified face as “a type of performance, in that we present an image of our ‘self’ through our appearance, our messages, and our actions that we believe will give the impression that we are competent and worthy social interactants,” [28, cited in 29, p. 206]. Goffman [28] wrote that our ideal face is constructed by fitting it suitably into the context requirements.

The degree of the threat to face depends on some elements in the context of interaction: power, distance, and rank [30]. Power refers to the hierarchical relation between the interlocutors. Distance refers to the degree of similarity and closeness between them. As for this study, the interviewers were instructors and the narrators were high school students. Obviously, the degree of face thread was high for the students. There are some strategies people need to follow to save face and these strategies are dictated by the context of interaction. According to Brown and Levinson [30], one way to save face is politeness.

From the sociolinguistic point of view, politeness systems are divided into three models: deference politeness systems, solidarity politeness systems and hierarchical politeness systems [31]. Eslami-Rasekh, Tavakoli, and Abdolrezapour [32] argued Iranian culture falls within the hierarchical one in which the position of one participant is superordinate (+power) and the position of the other one is a subordinate one. The one in a lower position is assumed to stick to established behavioral norms. At schools, students are expected to control their linguistic behaviour. They are to be exact, appropriate and to the point. Moreover, the abovementioned rules of interaction are unsaid and the Iranian students are assumed to know the norms of behavior dictated by the context. As [33] suggested cultures are divided into two types: low and high. Based on Halls’ classification of the cultures, Iran is a relatively high context culture. In these cultures members are supposed to understand what is not explicitly stated. In
the case of Iranian students, they have internalized norms of linguistic behavior; consequently, they know that in telling their stories they have to provide not too much and not too little information. Furthermore, in high context cultures, social hierarchy is very important, and the one in the lower status attempts to adjust his/her behavior according to the taste of the person in a higher status. And as it was said in literature review, one feature of a good narration is that the narrator tries to satisfy the listeners’ taste.

All in all, the results of this study put emphasis on developing narrative literacy in education, especially language education. Learners’ narrative skills can be empowered by encouraging them to read narrative, even when they are at college level. Research shows that spending more time on reading narratives correlated with higher GPA and those who read more narratives are less likely to quit studying [34]. Moreover, reading more narratives affects students’ cognitive development and critical thinking, which in turn, boost students’ ability in reading and writing, skills which are important in academic achievement.

Teaching narrative skills directly is also practiced by some researchers. For example, in the field of language education, [8] suggested the structure of good stories can be analyzed; storytelling strategies can be explained and put into practice in classes.

However, as NI has some subcomponents, and as it was shown in this study, each context might require one, or some aspects of NI be strengthened in order to be successful in language achievement. In the case of formal education of language in an Iranian context, narration revealed to be the most important ability. Therefore, future research should explore the relationship between NI and language achievement in language institutes. Additionally, learners’ gender can be taken into account.

APPENDIXES

<table>
<thead>
<tr>
<th>Item</th>
<th>Realization in the Narration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Explaining settings by referring to the 5 senses</td>
</tr>
<tr>
<td>2</td>
<td>Good recalling of events, people, and settings</td>
</tr>
<tr>
<td>3</td>
<td>Adequate use of summarizers</td>
</tr>
<tr>
<td>4</td>
<td>Appropriate use of summarizers</td>
</tr>
<tr>
<td>5</td>
<td>Recognizing the conflicts</td>
</tr>
<tr>
<td>6</td>
<td>Identifying the possible sources of conflicts</td>
</tr>
<tr>
<td>7</td>
<td>Attempting a measure of resolution for conflicts</td>
</tr>
<tr>
<td>8</td>
<td>Distinguishing between main plot and subplots</td>
</tr>
<tr>
<td>9</td>
<td>Perceiving situations as discrete temporal units with beginnings, middles, and ends</td>
</tr>
<tr>
<td>10</td>
<td>Linking events in a consequential order</td>
</tr>
<tr>
<td>11</td>
<td>Envisioning events before they occur</td>
</tr>
<tr>
<td>12</td>
<td>Maintaining central story-lines</td>
</tr>
</tbody>
</table>
### Item | Realization in the Narration
---|---
13 | To see situations from different angles | The narrator mentions a single event from different angels (from the viewpoint of different characters) while trying to give a multi-faceted account of the reported event (e.g., to character A, it was a disaster, but for B, there was no problem…)
14 | Imagining the characters’ thoughts and feelings | The narrator tries to mention what is going on inside the head of characters (e.g., he was thinking, she decided to…)
15 | Feeling compassions for the characters | The narrator makes sympathetic or empathetic comments (she was suffering and I could feel it, I felt bad for…)
16 | Using neither too much detail nor too little | The narrator mentions the details of the story only when it is really needed (to characterize the characters, or to explain the settings)
17 | Using rhetoric moves to sustain the interest of the audience | The narrator does not tell all the interesting points from the beginning. Sometimes he mentions something briefly and then goes to elaborate on it little by little by revealing pieces of information gradually hence maintain the interest of the audience and keeping them attentive to the rest of the story
18 | Maintaining a particular tone (e.g., optimism, negativism, realism) | The narrator is either realist, or optimist, or pessimist while reporting the events. He is consistent in representing his attitude toward the constructed reality in the story
19 | Mentioning ups and downs of the lives described in the narrative | The narrator explicitly mentions that event B makes character A’s life harder or easier
20 | Imagining a dramatic shape for the events in the narrative | The narrator looks at each event as a factor that makes the situation tragic, comic, etc for the characters
21 | Mentioning recurrent patterns in events | The narrator mentions that character A has done this or that several times; event B has happened frequently; setting C has been observed a number of times
22 | Analyzing recurrent patterns in events (going to the details and describing their development) | The narrator tries to explain what some actions, events, or settings are more frequent that others (trying to provide a unifying explanations for apparently different and unrelated elements in the story)
23 | Finding particular points in events and comments | The narrator explain about the messages embedded in the story (ethical messages, journalistic implications, religious beliefs, political propaganda, personal perceptions, or director’s intention to show or represent something in a certain manner)
REFERENCES

International Journal of Language and Communication Disorders, 43(2), 201-218.


### TABLE I

<table>
<thead>
<tr>
<th>Languages</th>
<th>Total NI</th>
<th>Narration</th>
<th>Emplotment</th>
<th>Characterization</th>
<th>Generation</th>
<th>Thematization</th>
</tr>
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<tbody>
<tr>
<td>English</td>
<td>.361**</td>
<td>0.349**</td>
<td>0.115</td>
<td>0.062</td>
<td>0.058</td>
<td>0.155</td>
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<tr>
<td>Farsi</td>
<td>.298*</td>
<td>0.322**</td>
<td>0.045</td>
<td>-0.049</td>
<td>0.036</td>
<td>0.133</td>
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<tr>
<td>Arabic</td>
<td>.370**</td>
<td>0.389**</td>
<td>0.070</td>
<td>0.077</td>
<td>-0.004</td>
<td>0.134</td>
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### TABLE 2

<table>
<thead>
<tr>
<th>Predictors</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>F</th>
<th>P</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narration</td>
<td>0.349</td>
<td>0.122</td>
<td>0.114</td>
<td>15.017</td>
<td>0.000</td>
<td>1.017</td>
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### TABLE 3

<table>
<thead>
<tr>
<th>Predictors</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>F</th>
<th>P</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narration</td>
<td>0.322</td>
<td>0.104</td>
<td>0.095</td>
<td>12.496</td>
<td>0.001</td>
<td>0.862</td>
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</table>

### TABLE 4

<table>
<thead>
<tr>
<th>Predictors</th>
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<th>R²</th>
<th>Adjusted R²</th>
<th>F</th>
<th>P</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narration</td>
<td>0.389</td>
<td>0.152</td>
<td>0.144</td>
<td>19.306</td>
<td>0.000</td>
<td>0.860</td>
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