Investigating Iranian Professors' Roles and Their Critical Thinking Abilities

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Abstract

In any instructional program, the most influential factor influencing the students’ level of achievement is the teacher (Rama, 2011). This study aimed at examining whether there is a significant difference among the critical thinking mean scores of the professors who adopt the animator, author, or principal role. Goffman (1981) stated that an animator is someone who reads aloud from a text; an author is someone who paraphrases the statements, and a principal is someone who expresses his/her own ideas. To achieve the study goal, a group of 30 professors teaching English was selected, and their students (N=328) were given metaphor checklist in order to choose the metaphors that best characterized the role of each professor. Furthermore, the professors’ critical thinking abilities were measured through Watson-Glaser Critical Thinking Appraisal test. This was done to find out whether the professors taking on the animator, author, or principal role differ significantly regarding their critical thinking skills. The result of one-way ANOVA indicated that the critical thinking mean score of the professors taking on the principal role is significantly higher than those adopting the animator or author role. The results offer implications and suggestions for the pedagogical consideration within the university context.

Keywords: Footing theory, Animator, Author, Principal, Critical thinking skills
1. Introduction

The challenge of education has always been in choosing and retaining qualified teachers. The experts in the teaching profession have also been concerned with providing qualified teachers with necessary knowledge and motivating them to have the optimum function (Vegas & Umansky, 2005). Key elements in the process of teaching and learning, teachers have undeniable influences on the student achievement (Moafian & Pishghadam, 2008; Sanders & Rievers, 1996).

There has been a large body of research which addresses the importance of the teacher’s role in the educational world (King Rice, 2003; Moafian & Pishghadam, 2008; Sanders & Rievers, 1996). Thus, the teacher’s role assumes seminal role within the educational context. The teacher’s role can be explored from various perspectives. A typical prism through which it can be investigated is the Footing theory.

1.1 Footing Theory

Introducing the concept of Footing in conversation, Goffman (1981) defined it as the alignment that participants in interaction take with regard to one another. In other words, "the alignment of an individual to a particular utterance can be referred to as Footing" (Goffman, 1974, cited in Goffman, 1981, p. 221). Goffman’s notion of Footing provides the ways to talk about the extent to which a speaker projects his/her identity within a particular interaction (Deckert & Vickers, 2011).

Goffman (1981) believed that the terms speaker and hearer are too shallow to provide us with anything beyond sound. Furthermore, the term speaker is troublesome and ambiguous since it does not decompose the role of the one who speaks into smaller and more detailed elements. As a result, Goffman rejected the oversimplified notion of speaker and proposed the Footing theory. To put it more clear, the speaker’s role itself can involve several different components. According to the Footing theory, a speaker may take on the three roles of animator, author, and principal.

As Goffman (1981) explained, an animator is identified as a talking machine who is engaged in acoustic activity. An animator is merely concerned with issuing sound from his/her mouth and moving his/her lips up and down. Reading aloud from a fully memorized text or a prepared script allows us to animate words we have no hand in and to express opinions, beliefs, and sentiments we do not hold.

The speaker's second role, identified by Goffman (1981), is the author. An author selects the sentiments expressed and the words in which they are encoded. To put it in other words, authoring an utterance means reformulating and paraphrasing the statements having been made before. Reading off from a text or a group of utterances not having been memorized gives the speaker the role of author.

Principal, the speaker's third role clarified by Goffman (1981), is someone who expresses his/her own beliefs; someone whose position is identified by his/her ideas expressed, and the one committed to what s/he says. The principal role entails "the extraporaneous ongoing
assembly and encoding of the text under the exigency of immediate response to one's current situation and audience, in a word, fresh production" (p. 227).

In teaching profession, an effective teacher is not the one who dominantly plays one of the roles and discards the others, but the one who makes an appropriate weighting of the roles in response to a specific context (Skidmore & Murakami, 2010).

To have a more comprehensive outlook on what happens in the classroom, Bannick and Dam (2006) accentuated the application of a more dynamic notion of the educational context. This implies giving special attention to changes in the footing occurring in a classroom. To this end, Skidmore and Murakami (2010) marked prosodic features of a teacher-student dialogue during whole-class discussion to show changes in the footing and signal boundaries between different kinds of pedagogic activities. The result showed that teacher led IRF (Initiation-Response-Feedback) discussion, which displays the teacher's role as animator, was marked prosodically by fast interaction pace and echoing of the students' answers with minimal uptake. However, the teacher's principal role, identified by thought and reflection, was marked prosodically by low pace, vowel lengthening, and quickened tempo.

The combination of animator, author, and principals roles taken on by a speaker in a specified turn is named production format (Hancock, 1997). When a speaker takes on all three roles of animator, author, and principal, his production format is complete, yet when the speaker does not embody the principal role, his production format is incomplete. In this case, the language used is "an artifact rather than a language in use" and it is called the "cited language" (Hancock, 1997, p. 221). There are many drawbacks with the cited language. The first downside is that the cited language is not taken as a challenge of the cited code. In other words, the speaker repeats or paraphrases the words without critically challenging them. Moreover, the focus of cited language is on wording not message. This means that the speaker imitating or reformulating the statements may ignore the message (Hancock, 1997). If the teacher’s role is looked at from the perspective of the Footing theory, it can be said that when the teacher does not embody the principal role, his/her production format is incomplete and his/her language is cited. In this case, not only does not the teacher critically challenge the imitated or restated statements, but also he may ignore the message. The demerits of the cited language call for the dire need to launch a study to explore the extent to which the teachers go beyond the repetition of the information, project their own identities, and think critically.

1.2 Critical Thinking Ability

In the ever-changing and challenging world, the ability to think critically has been identified to be significant in leading the man toward success. Education is the primary means for fostering and promoting critical thinking skills (Qing, Ni & Hong, 2010). As education is an increasingly complicated process requiring high level of knowledge, critical thinking, and problem solving skills, teachers are demanded to expand their visions and modify their roles to mesh with the expectation of education. This is because the time of the teachers merely concerned with following teaching instruction is over, and no more does the educational system need the teachers just injecting information into students' minds. Instead, the teachers
who are researchers, think critically, and look for new and effective teaching techniques are demanded (Ghaemi & Taherian, 2011).

In the most general sense, critical thinking is "a complex of intellectual skills that are consciously, deliberately, and consistently applied by a thinker when he or she is confronted with a body of data from which a conclusion must be arrived" (Taylor & Mackenney, 2008, p.131). It was also noted that critical thinking is a synthesis of skills including searching for logical, accurate, and justified premises of a concept, thinking critically and precisely based on some rules, evaluating the truth of concepts before making decisions, avoiding emotional reasoning, avoiding making mistakes, and differentiating between the observation and the inference (Piaw, 2010).

Birjandi and Bagherkazemi (2010, p. 136) believed that "critical thinking can be singled out as pivotal to teacher effectiveness, a quality that presupposes the teacher’s own capacity and willingness to think critically". They conducted a study in which they investigated the relationship between EFL teachers’ critical thinking ability and their professional success. To do so, 67 Iranian teachers and their students were handed Watson Glasser Critical Thinking Appraisal (WGCTA) and the successful Iranian EFL teacher questionnaire, respectively. The result indicated a significant correlation between teachers' student-evaluated scores and their critical thinking ability. Overall, it was concluded that high levels of critical thinking correlate with high levels of success.

The result gained by Birjandi and Bagherkazemi (2010) has a consistency with the findings obtained from another similar study. Ghaemi and Taherian (2011) also explored whether critical thinking skills correlate with teaching success. To accomplish the purpose of this study, 70 EFL teachers were demanded to take WGCTA; also, their students were asked to evaluate their teachers via answering characteristics of successful EFL teacher questionnaire. The findings of the study revealed that 84 percent of the teachers benefiting from high critical thinking skills are successful in their teaching career. In other words, the more critical thinking skills EFL teacher has, the more successful s/he is in teaching.

There has been a large body of research addressing a teacher in the educational context from various perspectives (Incecay, 2010; Rotgans& Schmidt, 2011). Few numbers of studies, however, explored the teacher's role based on Goffman’s Footing theory (Skidmore & Murakami, 2010) and investigated the influence of the teacher’s role on their critical thinking skills (Ghaemi & Taherian, 2011). Therefore, the present study addresses the following question.

Q: Is there any significant difference among the critical thinking mean scores of the professors who adopt the animator, author, or principal role?

2. Methodology

2.1 Participants

This study consisted of two groups of participants. The first group was a total of 328 participants, including the BA and MA students majoring in English Literature or TEFL at
Ferdowsi University of Mashhad, Sabzevar Tarbiat Moalem University, Semnan University, and Tabaran University. The participants’ age ranged from 20 to 34.

The second group of the participants consisted of 30 professors (females=10, males=20). All the professors, whose age ranged from 27 to 45, taught at Ferdowsi University of Mashhad, Sabzevar Tarbiat Moalem University, Semnan University, or Tabaran University. For both groups of the participants, no distinction was made between the males and females.

2.2 Instrumentation

In order to address the research questions, firstly, the students were asked to fill out a metaphor checklist. This checklist consists of one prompt, "My professor is like a -----------", which was followed by the options which had been selected from the checklists designed by de Guerrero and Villamil (2002), Nikitina and Furuoka (2008), Oxford et al. (1998), Pishghadam et al. (2009), Saban (2004), Saban et al. (2007), and Saban (2010). The options, determining the professors' dominant roles regarding Goffman’s Footing theory, consisted of 7 metaphors reflecting the animator role (robot, parrot, copy machine, projector, repeater, microphone, and cassette player), 7 metaphors representing the author role (scaffolder, missionary, cook, puzzle doer, mixer, summarizer, and molasses), and 7 ones identifying the principal role (writer, power plant, sun, artist, spring, challenger, and window to the world) (see appendix). The students were demanded to select the metaphors which pictured each professor. The content validity of the checklist was substantiated and its semantic disambiguation was done. The reliability of the checklist, which was computed by the Cronbach's Alpha, was reported to be 0.79 for the whole sample. It shows that the results of the checklist are satisfactorily reliable in terms of their internal consistency.

The Watson Glaser Critical Thinking Appraisal (WGCTA), used as the second instrument, was applied to investigate the university professors’ critical thinking abilities. This standard test, comprising of 80 items, was constructed around 5 subscales, namely, inference, the recognition of assumptions, deduction, interpretation, and the evaluation of arguments. It consists of 16 likert scaled questions measuring inference, 16 two scaled questions assessing the recognition of assumptions, 32 two scaled questions evaluating deduction and interpretation, and 16 other likert scaled questions measuring the evaluation of arguments. The reliability of the questionnaire was calculated via Cronbach’s alpha, and the estimate turned out to be 0.88.

The WGCTA, the oldest and among the most used and studied critical thinking measurements (Bernard et al., 2008), was exploited by Bernard et al. (2008), Birjandi and Bagherkazemi (2010), Faravani (2006), Ghaemi and Taherian (2011), and Khodadady, Shirmohammadi, and Talebi (2011) among many others.

2.3 Data Collection and Data Analysis

At the first step, the metaphor checklist, which required the participants to select the metaphors that best characterized the role of each professor, was employed. As Moser (2000) claimed, metaphor analysis allows the researchers to identify, categorize, and discuss the hidden ideas and assumptions behind each metaphorical concept. Hence, the metaphors
selected by the students enabled the researcher to identify the dominant role of each professor as animator, author, or principal. For the purpose of analyzing the data, the randomly used metaphors in the metaphor checklist that were chosen by the participants were grouped under the three roles of animator, author, and principal. Then, the frequency of the metaphors of each group was computed. SPSS (version 11.5) was used in order to run the Chi-square to find out whether the differences among the three kinds of the metaphors chosen by the participants were significant. In doing so, the role of each professor was determined.

In the next stage, to obtain the measures of the professors’ critical thinking abilities, the 30 professors were asked to take WGCTA. Then, the critical thinking score of each professor was specified from 0 to 80. Overall, for each individual professor, his/her critical thinking score and dominant role as animator, author, or principal were determined. The data regarding the professors’ critical thinking abilities was also analyzed through the 11.5th version of SPSS. One-way ANOVA was run to determine whether there was a significant difference among the critical thinking scores of the professors taking the animator, author, or principal role.

3. Results

3.1 Metaphor Analysis Results

In this phase, the students received a metaphor checklist and were required to choose the metaphors that portrayed their ideas about the role of each professor. In the following tables, the results of the Chi-square, which had been run to check the differences among the selected metaphors, are shown.

Table 3.1. The results of Chi-square for the metaphors selected by BA and MA students about their own professor

<table>
<thead>
<tr>
<th>Role</th>
<th>Observed</th>
<th>Expected</th>
<th>Dominant role</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Animator</td>
<td>33</td>
<td>70.3</td>
<td>Author&gt;principal&gt;animator</td>
</tr>
<tr>
<td>Author</td>
<td>107</td>
<td>70.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>71</td>
<td>70.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Animator</td>
<td>61</td>
<td>36.7</td>
<td>Animator&gt;author/principal</td>
</tr>
<tr>
<td>Author</td>
<td>36</td>
<td>36.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>13</td>
<td>36.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Animator</td>
<td>20</td>
<td>29</td>
<td>Author&gt;principal/author</td>
</tr>
<tr>
<td>Author</td>
<td>41</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>26</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Animator</td>
<td>63</td>
<td>41</td>
<td>Animator&gt;author/principal</td>
</tr>
<tr>
<td>Author</td>
<td>37</td>
<td>41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>23</td>
<td>41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Animator</td>
<td>10</td>
<td>17.3</td>
<td>Author&gt;principal/author</td>
</tr>
<tr>
<td>Author</td>
<td>25</td>
<td>17.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>17</td>
<td>17.3</td>
<td></td>
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<tr>
<td>F</td>
<td>Animator</td>
<td>Author</td>
<td>Principal</td>
<td>Animator&gt;author&gt;principal</td>
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<td>----------------------------</td>
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<tr>
<td>G</td>
<td>Animator</td>
<td>Author</td>
<td>Principal</td>
<td>Principal&gt;author&gt;animator</td>
</tr>
<tr>
<td>H</td>
<td>Animator</td>
<td>Author</td>
<td>Principal</td>
<td>Author&gt;principal&gt;animator</td>
</tr>
<tr>
<td>I</td>
<td>Animator</td>
<td>Author</td>
<td>Principal</td>
<td>Principal&gt;author&gt;animator</td>
</tr>
<tr>
<td>J</td>
<td>Animator</td>
<td>Author</td>
<td>Principal</td>
<td>Author&gt;principal&gt;animator</td>
</tr>
<tr>
<td>K</td>
<td>Animator</td>
<td>Author</td>
<td>Principal</td>
<td>Author&gt;principal&gt;animator</td>
</tr>
<tr>
<td>L</td>
<td>Animator</td>
<td>Author</td>
<td>Principal</td>
<td>Author&gt;principal&gt;animator</td>
</tr>
<tr>
<td>M</td>
<td>Animator</td>
<td>Author</td>
<td>Principal</td>
<td>Principal&gt;author&gt;animator</td>
</tr>
<tr>
<td>N</td>
<td>Animator</td>
<td>Author</td>
<td>Principal</td>
<td>Author&gt;principal&gt;animator</td>
</tr>
<tr>
<td>O</td>
<td>Animator</td>
<td>Author</td>
<td>Principal</td>
<td>Author&gt;principal&gt;animator</td>
</tr>
<tr>
<td>P</td>
<td>Animator</td>
<td>Author</td>
<td>Principal</td>
<td>Principal&gt;author&gt;animator</td>
</tr>
<tr>
<td>Q</td>
<td>Animator</td>
<td>Author</td>
<td>Principal</td>
<td>Principal&gt;author&gt;animator</td>
</tr>
<tr>
<td>R</td>
<td>Animator</td>
<td>Author</td>
<td>Principal</td>
<td>Animator&gt;author/principal</td>
</tr>
<tr>
<td>S</td>
<td>Animator</td>
<td>Author</td>
<td>Principal</td>
<td>Author&gt;animator&gt;principal</td>
</tr>
<tr>
<td>T</td>
<td>Animator</td>
<td>Author</td>
<td>Principal</td>
<td>Author&gt;principal&gt;animator</td>
</tr>
</tbody>
</table>
In Table 3.1, the results of the Chi-square for the metaphors reflecting the roles of each professor teaching at the BA or MA level are listed. As this Table reports, for each professor, there is a significant difference among the metaphors determining their roles as animator, author, and principal (p<.05). Each professor's dominant role is identified based on the comparison between the observed and expected numbers of the metaphors.'

3.2 Critical Thinking Score Results

In this phase, 30 professors teaching at the BA or MA level were required to fill in Watson-Glaser Critical Thinking Appraisal. The results of one-way ANOVA, applied to check the differences among the professors' critical thinking abilities, are presented in the following tables and figure.
Table 3.2 lists the results of one-way ANOVA run to identify whether there is a significant difference among the critical thinking mean scores of the professors taking on the animator, author, or principal role. As it is evident in this Table, there is a statistically significant difference among the university professors in terms of their critical thinking scores (p<.001). Such a result rejects the hypothesis that there is no significant difference among the critical thinking mean scores of the professors who adopt the animator, author, or principal role.

Table 3.3. The Results of Duncan Conducted on the Critical Thinking Mean Scores of the Professors Taking on the Animator, Author, or Principal Role

<table>
<thead>
<tr>
<th>Role</th>
<th>N</th>
<th>Subset for alpha=.05</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>8</td>
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<td>sig</td>
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<th>1</th>
<th>2</th>
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<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>44.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>47.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>60.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sig</td>
<td>.38</td>
<td>1.0</td>
<td></td>
</tr>
</tbody>
</table>
Table 3.3 presents the results of Duncan employed to compare the critical thinking mean scores of each group of the professors adopting the animator, author, or principal role. In subset 1, are the animator and author roles situated. That the p-value is more than 0.05 suggests no statistically significant difference between the critical thinking mean scores of the professors who adopt the animator or author role. However, that the principal role is situated in subset 2 reveals that the critical thinking mean score of the professors taking on the principal role is significantly higher than the critical thinking mean scores of those adopting the animator or author role. Such a significant difference is pictorially illustrated in Figure 3.1 Overall, the results draw attention to the fact that the professors who act as agents of change, challenge current intellectual framework, and reform old views enjoy higher thinking skills as compared to those concerned with the imitation and transmission of common trend of knowledge.

4. Discussion

New millennium has created a radical shift in the focus of education. In fact, the time of injecting soon-to-be-obsolete information is over. No more does the educational system need the teachers concerned with the injection of information into students' minds. Rather, teachers are demanded to modify their roles to fulfill the primary aim of education which is providing a setting in which both the learners and they themselves negotiate their own identities, question concepts critically, and co-construct the knowledge (Ghaemi & Taherian, 2011; Green & Jax, 2011).

The significant finding of this study is that the professors who take on the principal role benefit from higher critical thinking ability in comparison to those who adopt the animator or author role. Based on the definition of the principal role provided by Goffman (1981), a professor who takes on the principal role moves beyond the transmission of knowledge through providing opportunities for challenging the flow of information and having a critical outlook on common knowledge. Besides, a critical thinker is someone who evaluates ideas, judges the credibility of the claims, critically reflects on assumptions, and produces
arguments (Fisher, 2001). It is evident that the characteristics of such a person are compatible with those of a professor taking on the principal role. In other words, a professor who discards delivering taken-for-granted information and provides opportunities for questioning and critical awareness reflects the in-depth insight of critical thinking. However, a professor who adopts the animator or author role is concerned with repetition, emulation, clarification, and simplification of the concepts of the books. In a classroom where such a teaching practice is dominant, the professor does not open the space for challenging current intellectual framework and promoting critical consciousness. Lack of a critical outlook can be attributed to the professor's lower levels of critical thinking skills.

As the university professors take on the animator and author roles in the current situation (Ghapanchi & Talebi, 2012; Pishghadam & Shirmohammadi, 2012), they are demanded to modify their roles to benefit from higher critical thinking skills. Ghaemi and Taherian (2011) indicated that, in the face of much incoming information in today's world, the educational system needs the teachers who think critically. The educational system used to be concerned with just delivering facts. Now, one of the primary responsibilities of teachers is to deal with complexities through thinking critically (Green & Jax, 2011). Indeed, the teachers who show higher gains in critical thinking skills are pedagogically more successful (Birjandi & Bagherkazemi, 2010; Ghaemi & Taherian, 2011).

Based on these results, a number of implications can be inferred. First, educational policy makers can benefit from the findings as the very foundation of educational system needs to undergo a radical shift. Specifically, training programs can be launched to make the university professors aware of the need to reflect on and modify their roles in order to meet the demands of the challenging millennium, for no more does the educational system need the professors concerned with the transmission of information; instead, the professors who contribute to the field of knowledge are required (Ghaemi & Taherian, 2011; Somech & Zahavy, 2000).

Next, the findings of this study will be highly invaluable for teacher training courses because the change toward agency demands a new outlook on the teacher education (Catelly, 2011). Prospective teachers should be trained to provide a challenging context in the classroom and promote critical awareness through opening the space for reforming the current knowledge rather than emulating it.

Since there are some limitations to every study, all the notions could not be covered here. This research can be conducted in other universities in Iran and other countries to compare the results. Moreover, other qualitative research tools such as observation can be exploited.

References


**Appendix**

**Metaphor checklist**

Gender:  Male ☐   Female ☐   Age:  ______________

I am ----------- MA student ☐ I am studying in ----------- University.

BA student ☐

*Choose the metaphors that best describe your professor. You can choose more than one option. Pay attention to the definition of each metaphor.*

**What is your idea of your professor?**

😊 My professor is like a -----------.

- Robot (S/he works automatically and is controlled by pre-programs.) ☐
- Writer (S/he generates and transfers his/her own original ideas.) ☐
- Scaffold (S/he simplifies concepts and teaches through building on concepts.)
- Power plant (S/he generates original ideas which the students then receive.) ☐
- Missionary (S/he simplifies and transfers the concepts presented in the books for students' better understanding.) ☐
- Sun (S/he provides light when you are confused with materials.)
- Parrot (S/he repeats everything exactly from the books.)
- Copy machine (S/he transfers all the information saved in the books.)
- Artist (S/he moulds us into works of arts through a high degree of skill and creativity.)
- Projector (S/he reflects exactly what the materials are written about.)
- Cook (S/he picks bits and pieces of different materials to find the perfect fit for student understanding.)
- Repeater (S/he repeats everything exactly from the materials.)
- Spring (S/he constantly projects his/her own original ideas.)
- Microphone (S/he makes the voice of material louder.)
- Puzzle doer (S/he arranges different pieces of information to find the perfect fit for student understanding.)
- Mixer (S/he mixes pieces of different information and produces a combined concept.)
- Summarizer (S/he summarizes what is provided by materials.)
- Challenger (S/he makes us interested in taking new challenges in learning.)
- Cassette player (S/he records and then transfers the information of the materials.)
- Molasses (S/he sticks the materials while adding a little sweetness.)
- Window to the world (S/he creates challenges and brings about change.)

Name any other metaphor that can describe your professor ---------------.