

Metaphorical Analysis of Iranian MA University Students' Beliefs: A Qualitative Study

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Abstract

Following the innovations in language teaching and learning, metaphor analysis as an indirect tool of delving into individuals' beliefs has been utilized in this study to explore the use of metaphor to express the various perspectives of university students about the process of learning and teaching. In fact, this research intends to examine the metaphors produced by Iranian MA students about learning and teaching both in ideal and current situations. Using the Iranian contexts of education, this study aimed at: first, collecting the metaphors the students created by using the prompts "A university student is/should be like a..." and "A university professor is/should be like a...", and second, identifying and analyzing the metaphors. The results demonstrated that MA university students have different conceptions of learning and teaching, wishing to form the bedrock of their teaching and learning paradigm based on *situative* learning concepts.

Keywords: Conceptual metaphor, University students, University professors, Linguistic metaphor, Metaphor analysis

1. Introduction

Every person has a number of concepts and beliefs in his/her mind, shaping his/her behavior. This system governs how individuals interpret and understand the realities around themselves and their relationships with other people. The noticeable point is that their conceptual system is metaphorical in nature (Lakoff & Johnson, 1980).

Because metaphors involve fancy language they are considered as part of figurative language and literary works and are ignored by linguists, but as individuals examine everyday thoughts and language more carefully they understand that metaphors are a central part of both human cognition and language (Ellis & Barkhuizen, 2005; Lakoff & Johnson, 1980). Metaphors shape our thinking, understanding and can change world perceptions (Lakoff & Johnson, 1980; Richardson & Matlock, 2007).

According to Lakoff and Johnson (1980) metaphors take an idea and link it to another for better understanding and experiencing a concept (target domain) in terms of another one (source domain). Individuals try to understand a complex idea or phenomenon by using a familiar object and this shapes metaphorical thinking (e.g. 'Love is a rose' is a metaphorical expression used to explain the concept of love through a familiar object like a rose).

As mentioned earlier, peoples' beliefs can have a major impact on their thoughts and decisions. This is also true for learners. By understanding how a learner perceives the process of learning, the reason for the problems they face, and their experiences in the classroom learners can improve the quality of their learning. By closely examining learners' mental concepts we can gain insights into their cognition (Saban, 2004; Tobin & Tippins, 1996).

The aim of the present study is to gather the metaphors MA students produce about themselves and their professors in current and ideal situations and to examine them carefully in order to heighten students' self-consciousness about the roles they assume in the process of learning. This study provides the opportunity to gain insights into the beliefs hidden in these metaphors.

2. Theoretical Background

Classical theories saw metaphor as a matter of language not thought. In these theories metaphor was a novel linguistic expression in which a group of words were used outside their normal meaning to define another similar concept. Lakoff (1993) put an end to the belief that metaphor is a part of figurative language and showed that metaphor can be formed in ordinary language and it is primarily conceptual and exists in our thought.

Our conceptual system is metaphorical, playing a major role in clarifying our everyday realities. So the way we think, what we do is metaphor bound. It is not just a rhetorical device, but a reflection of our internal conceptual structure in contradiction to our unawareness that the ordinary language we produce is based on metaphor (Nam, 2010). The need for metaphorical definitions in our conceptual system comes from the fact that many abstract concepts are not described in our experience. Therefore, in order to understand them we need to use other concepts that are clear for us. That is why, metaphors are pervasive in our thought, language, actions, and experiences, and also they fulfill the purpose of our everyday functioning.

According to Lakoff and Johnson (1980), metaphors are conceptual phenomena as well as linguistic ones which can construct and restrict ideas. These mappings are based on our everyday experiences, so they help us understand how people think, communicate and perceive the world (Cameron, 2003). Moreover, they connect entities between source and target domains. Conceptual domain (called source domain), which is composed of particular experiences (e.g., Journey in LIFE IS JOURNEY) is used as a source for metaphorical expressions in order to understand the other conceptual domain (called target domain) (e.g., life in LIFE IS JOURNEY). The target domain is abstract and it takes structure from the source domain by conceptual metaphor (Nam, 2010).

3. Metaphors in Language Teaching

Metaphors produced by teachers play a significant role in providing insight into their experiences and ideas. They can also help teachers reflect on their own practices as an external viewer and try to improve their professional career and conceptions. There is a rather large volume of works about teacher-produced metaphors done by scholars which pave the way for further areas of research.

Oxford, Tomlinson, Barcelos, Harrington, Lavine, and Saleh (1998) conducted a study in which the participants were supposed to write six weekly journals about the teaching and learning processes from each class. They grouped the metaphors based on four perspectives: 1) social order 2) cultural transmission 3) learner-centered growth 4) social reform. The results show a variety of metaphors (teacher as manufacturer, conduit, nurturer, acceptor, entertainer, and learning partner) describing language teachers and how language teaching methods are related to these four philosophical viewpoints.

In another study, Martinez, Sauleda, and Huber (2001) studied the metaphorical conceptions of learning based on the reflections of 50 experienced teachers. They aimed at categorizing the metaphors into three main dimensions of the learning space: behavioristic/empiricist, cognitive/constructive and situative/socio-historic perspective. The behavioristic approach views learning as the process of stimulus-response formation. The metaphors in this category represent the learners as passive recipients, teachers as transmitters of knowledge. The second dimension defines teachers as facilitators and learners as active participants reconstructing knowledge. Finally, the last approach holds this belief that learning is situated in contexts and is produced by participation in the activities of community. The results show that the majority of these teachers share traditional metaphors about teaching and learning as transmission of knowledge. A group of teachers expressed constructivist metaphors. Only a minority conceptualized teaching and learning as a social process.

Moreover, DeGuerrero and Villamil (2002) adopted a socio-cultural approach and elicited metaphors from 22 Puerto Rican teachers which represented teachers in the classical roles of leader, provider of knowledge, agent of change, nurturer and artist, whereas learners were displayed in a range of roles, from the most active (player, musician) to the least active (TV viewer, piece of clay). Saban (2003) employed a questionnaire including fixed response Likert scale and open-ended questions and administered them to the students of elementary teacher education. They used metaphors to elicit the perceptions of prospective elementary teachers about elementary schooling (i.e., factory, prison, army, hippodrome, bus, hospital, island, garden, family, team, circus, and restaurant). These metaphors fall into 2 theoretical perspectives in educations: 1. Teacher-centered or content-oriented perspective 2. Student-centered or learning-oriented perspective. The results revealed that male and female prospective elementary teachers' preconceptions of teaching are significantly different. In another study, Saban (2004) considered metaphor as a means of research to provide analysis and examine the images prospective classroom teachers have of themselves as future teachers (i.e., professional self-images), their elementary teachers

(i.e., former classroom teachers), and their cooperating teachers (i.e., supervisors of student teaching practices). In this study, a Likert scale questionnaire consisting of 20 metaphorical images of “classroom teacher” was administered to 363 exit level elementary teacher education students. Results revealed that the teacher candidates seemed to be less teacher-centered and more student-centered than their both elementary and cooperating teachers. Another point was that female teacher candidates were less teacher-centered and more students-centered in comparison to their male peers. Moreover, Saban, Kocbeker and Saban (2007) investigated the metaphors formulated by student teachers to describe “teacher”, and to find out the categories that these metaphors fall into and the conceptions they represent and also relate the identified conceptual themes with other socio-cultural contexts. They used the metaphor analysis by Moser (2000) which allowed them to analyze the data qualitatively and quantitatively. In this study, the main conceptual categories were teacher as knowledge provider, caretaker, curer, craftsperson, superior authoritative figure, change agent, entertainer, counselor, nurturer, facilitator, cooperative, and democratic leader. The result showed that many prospective teachers tend to detach themselves from controlling and transforming aspects of teaching and it strongly suggests that teacher educators can use metaphor analysis to help and guide student teachers in examining their values and beliefs about teaching and learning.

In another research done by Pishghadam, Askarzade Torghabeh and Navari (2009), it was found that majority of the metaphors employed by learners portray a behaviorist approach in teaching. Besides, Pishghadam and Navari (2010) explored the present and ideal situations of language teachers and learners in Iran’s formal and informal educational context through analyzing the metaphors teachers and learners produced. The results showed that behavioristic beliefs dominated the educational context of Iran. The metaphors derived from the results of this study were teacher as conduit, provider, facilitator, scaffolder and learner as recipient, developing organism, and interactor. Another finding of this study was the significant difference between learners of language institutes and schools in the understanding of English education.

4. Metaphors in Language Learning

Metaphors can contribute to learning by helping students use them as a tool to enhance learning because metaphors help individuals perceive unfamiliar concepts (Cameron, 2003). A large number of studies focusing on the teacher-produced images, pre and in-service teacher’s beliefs have used metaphor analysis as their tool of enquiry (Leavy, McSorley & Bote, 2007; De Guerrero & Villamil, 2001; Mahlios & Maxon, 1998; Oxford et al., 1998). But studies which examined students’ attitudes towards learning and the problems and experiences in this process are very limited (Nikitina & Furuoka, 2008; Saban, Kocbeker & Saban, 2007; Oxford et al. 1998).

Oxford (2001) examined the narratives of 473 foreign/2nd language learners about 3 teaching approaches. Metaphors like teacher as “manufacturer, tyrant, and hanging judge” were taken from “Autocratic Approach”. The “Participatory/Democratic Approach” included metaphors like teachers as “challenger, catalyst, and family member”. The “Laisser-Faire Approach” produced metaphors like teachers as “blind eyes & bad baby-sitter”. The researcher mentioned that different learners favored different metaphors and they also varied in the extent they used metaphors to talk about their learning and teachers (cited in Ellis & Barkhuizen, 2005).

Ellis (2002) studied 6 adult learners of German enrolled in beginner German courses. The participants kept a diary which should be written about the topics they were instructed to describe but they were not told to report about their language learning beliefs. Their diaries were analyzed to identify and classify the metaphors they used. This study provided us with 6 main conceptual metaphors. The most used metaphor was “learning as a journey” which revealed that learners view learning as a journey in which they may face difficulties until they achieve their goal. He claimed that learners employed this metaphor to serve as a metacognitive strategy for assessing their progress. Other metaphors were “learning as a puzzle” (related to cognitive aspect of language learning), “learning as suffering” (related to affective side of language learning), learning as a struggle and learning as work which reflects language learning as an effort which is directed by students themselves. The results of this study showed that learners’ beliefs about language learning included both the cognitive and affective aspects and those learners may not talk about their affective beliefs when asked directly. So metaphor analysis can provide us with an indirect approach which can help us shed light on these two aspects of learners’ beliefs.

In the study done by Nikitina and Furuoka (2008) the focus was on metaphors produced by learners about language teachers. 23 Malaysian students created metaphors about language teachers. The study aimed at identifying whether the metaphors produced can fall into 4 categories produced by Oxford et al. (1998) and exploring whether gender can influence the metaphor production. The qualitative analysis showed that metaphors can be gender related but the quantitative phase did not indicate any statistical difference related to gender.

5. Purpose of the Study

The main purpose of this study is to collect the metaphors MA Iranian students produced to express their hidden ideas and beliefs about teaching and learning in the current and ideal situations and to identify the dominant beliefs among them.

Q1: What are the metaphors produced by the MA Iranian students of English about students in current situations?

Q2: What are the metaphors produced by the MA Iranian students of English about students in ideal situations?

Q3: What are the metaphors produced by the MA Iranian students of English about professors in current situations?

Q4: What are the metaphors produced by the MA Iranian students of English about professors in ideal situations?

6. Methodology

6.1 Participants and Setting

The total population participating in this study consisted of 50 individuals (female= 34, male=16). They were M.A. students, all majoring in English Language Teaching, whose age ranged from 23 to 50. The students were studying in Mashhad (a city in Iran). These students were in their first or second year of their study in university. It also should be mentioned that MA program in Iran is both course and project based.

6.2 Instrumentation

In order to address the research questions, the participants were asked to fill out the questionnaire designed by Pishghadam, Askarzadeh Torghabeh, and Navari (2009), which took 15 minutes to answer the questions. This questionnaire was adapted to university situations in Iran, consisting of four questions: "1. *what is your idea of a university professor?*" "2. *What is your idea of an ideal university professor?*" "3. *What is your idea of a university student?*" "4. *What is your idea of an ideal university student?*" The reason for providing the participants with this kind of prompting was realizing their attitudes towards the current and ideal situations. They were asked to complete these questions with as many metaphors as they prefer to mention to describe university students and professors in the current and ideal situations.

6.3 Data Collection and Analysis

The process of data collection started in September (2010) and continued until February (2011) to gather all the data. According to Ellis (2008), one of the most effective ways of conducting a metaphor analysis is to experimentally eliciting the metaphors through which the researcher can explicitly ask the subjects to provide metaphors in order to describe their teachers/learners. In this study, for gathering the data, a metaphor –elicitation instrument was employed which consisted of a question with an instruction and a prompt: "*What is your idea of a university professor/ student? A university professor/student is like....*" which required the subjects to express their ideas about what they usually believe of the professors and students; also they had to answer this question "*what is your idea of an ideal university professor/student? An ideal university professor/student is like....*" so the participants can mention their ideas about their ideal professors and students. In this phase, the participants wrote down as many metaphors as they wanted to express their views of their professors and students and also provided an explanation for the given metaphors to ease the process of analyzing the data.

A number of studies employed the qualitative approach to identify and analyze the metaphors that language teachers and learners produced (de Guerrero & Villamil, 2002; Oxford, 1998; Saban, Kocbeker & Saban, 2007). Ellis (2008) stated that considering metaphor analysis as a qualitative research methodology helps researchers to uncover and analyze the hidden beliefs and discuss the ideas behind them. It also elicits the necessary information indirectly.

The first step was to organize the metaphors alongside with their entailments. Next, the metaphors related to the study were investigated so that the hidden concepts behind them could be explicated. In this stage, 190 metaphors and their entailments were identified and listed. These metaphors created by the participants were scrutinized to determine the embedded thought patterns in each of them. Then, the metaphors were categorized based on the typology of the metaphors developed by Martinez, Sauleda, and Hubert (2001): behaviorist/empiricist, cognitive/constructive, situative or socio-historical perspective. Finally, each metaphor was categorized by the researchers first individually and then in a discussion with two experts to approve the grouping. For each category of metaphors the frequency and percentage were calculated. Then, the metaphors related to each group of participants and their percentages were compared to uncover the ideas in each context.

7. Results

All the participants in this study were required to complete the forms in which they were asked to write down as many metaphors as they prefer to talk about themselves and their professors in both the current and ideal situation. The data is presented by the frequency and percentage in the following tables. (Table 1)

As Table 1 shows the majority of metaphors ($p=61.3\%$) created by MA students about their professors in the current situation represent a notion of teaching which is based on *behaviorist/empiricist* ideas. These students in fact, interpreted learning as making new associations and teaching as transmitting knowledge. Professors are mostly seen as the only active person in the class, controlling everything until knowledge as a determined product is transmitted to the passive learner. The concept of professor as a dictator and a typical teacher, the most dominant metaphors in this group, implies the position of the teacher in classroom as somebody should be followed with no questioning. For this group, *cognitive* ($p=18.1\%$) and *situative* metaphors ($p=20.4\%$) represent the other ideas. (Table 2)

Table 2 reports that MA students would prefer their teachers to be mostly classified under the category of situative/socio-historical ($p=51.06\%$). This implies that MA students no longer like to be under the umbrella of behaviorism ($p=10.6\%$), instead they would rather have a professor who provides support and guidance in specific situations. This approach views a learner as an interactor who learns doing situated collaborative activities and constructs knowledge that can be used in life-like situations. The concept of a professor as a *candle* represents the idea that they can help students make informed choices and try hard in order to guide and enable them to follow the right path to achieve further successes. (Table 3)

According to Table 3, more than half of the metaphors ($p=68.8\%$) produced by MA students about students are attributed to the *behaviorist/empiricist* perspective of learning. Evidently, they interpret the students' role as a passive one in the classroom to whom the knowledge is transferred and characterize learning as still depending on behaviorism. Typical examples are *sheep* and *receiver* which represent the lack of motivation among students to be their own agent of learning. The emphasis in these metaphors is on looking at a learner as a receiver who absorbs information with no control over them. The other metaphors in this group are put into *cognitive* ($p=21.8\%$) and *situative* ($p=6.7\%$) categories. (Table 4)

Illustrated in Table 4 is the prevailing attitude of the MA students toward learning based on the *situative* perspective in the ideal situation. What they have mentioned about *situative* metaphors constitute 64.8% of their total ones. This clarifies the beliefs that the MA students would rather follow the guidelines of *situative* paradigm to make use of the appropriate contexts in which they can reap the benefits of their perseverance. The most dominant metaphors in this group are *motivated researcher* and *critical thinker* which draw attention to the fact that students enjoy doing joint activities, constructing knowledge socially, and receiving support from their peers and professors.

8. Conclusion

This study aimed at exploring the metaphors MA students produced to talk about university professors and university students in both current and ideal situations. The analysis can help us gain insight into their hidden beliefs and find out the factors that can affect teaching and learning. Based on the results, the metaphors were categorized according to the three perspectives of *behaviorist*, *cognitive* and *situative* learning. The findings revealed that MA students projected different expectations regarding the professors and students. Disclosing and analyzing these metaphors can assist them gain insight into their real ideas about teaching and learning.

The metaphors chosen by MA students about professors in the current situation show that behaviorism dominates the current environment in the process of teaching ($p=61.3\%$). More than half of the metaphors pictures professors in the current situation in the classical roles of teacher as leader (*dictator*, *clergy man*, and *manager*), provider of knowledge (*comprehensive book*, *window*, *computer*, and *cassette player*) which are all related to the ideas of behaviorism. These linguistic metaphors reinforce the conceptual metaphor of TEACHER AS CONDUIT in which there is no role for feelings and relationships between students and professors. Students are merely *robots*, *employees*, and *memorizing machines* that are controlled by a greater power and there is no choice for them regarding *what* and *how* they want to study. As Pishghadam and Navari (2010) stated, this is also the dominating belief among teachers and students in Iranian schools where teachers are inclined to keep the behaviorist approach to keep the power distance between students and themselves. Unfortunately, *cognitive* and *situative* approaches do not have a noteworthy place among the metaphors produced by students which shows the lack of proper understanding of teaching and learning in Iranian universities.

However, the metaphors created about professors in the ideal situation show contradictory results against the current situation. In the ideal situation, the findings show that MA students prefer to have a professor who believes in the guidelines of *situative* approach to learning ($p=51.6\%$) and tries to build a close relationship and shows respect for the ideas and preferences of students. The metaphors *sun*, *tour leader*, and *manger* imply the idea that professors should act as supporters who try to ease the process of learning and to assist students in developing their talents. The findings show the inclination of the students toward having a professor who provide them with guidance and gradually help students act on their own. Metaphors such as *supporter*, *consultant*, and *psychologist* prove this attitude among students. Some of the metaphors are related to the *cognitive* view of learning which is presented through the linguistic metaphors such as *coach*, *parent*, and *friend* that reinforce the conceptual metaphors of TEACHER AS FACILITATOR. According to de Guerrero and Villamil (2002), these metaphors portray teachers as a provider of support, feedback, and friendly atmosphere.

In the same vein, 68.8% of the metaphors produced by MA students about students in the current situation suggested they perceive themselves as being merely a follower of their professors. The linguistic metaphors *sheep*, *receiver*, and *person in dark*, emphasizing on the conceptual metaphor of LEARNER AS RECIPIENT, define a student as an inactive and passive person in classroom whose job is to receive whatever the professors dictate. On the contrary, the majority of the metaphors produced about students in the ideal situation is in favor of the *situative* approach (Nikitina & Furuoka, 2008). Apparently, students prefer to change their role as a passive recipient of knowledge and move toward an active partner in learning with their professors. They assume the metaphors *critical thinkers* and *active researchers* represent an ideal student who acquires knowledge as a by-product of doing a task. The conceptual metaphor of LEARNER AS INTERACTOR is behind these produced metaphors that suggest the role of students as doing situated tasks that can result in getting access to knowledge that can be used in real life situations.

Therefore, as the comparison between the ideal and current situations shows, both professors and students suffer from the same problem which is the dominating belief that behaviorism is best suited for Iranian educational contexts, easing the process of learning and teaching because of keeping the power distance and also what our culture dictates. However, students prefer to learn based on the *situative* approach and be instructed by professors who assert that the conventions of this approach can provide the best learning environment because it prepares them for actual use of their knowledge outside the classroom.

Identifying these underlying beliefs, students and professors can reflect on their present styles of learning and teaching in order to find out the points that help or hinder their progress. The roles they consider for themselves and the underlying conceptions behind them can persist over time and change to erroneous beliefs that cannot be reformed, but metaphor analysis as a reflective tool assists both teachers and students to shed light on implicit ideas and assumptions, and challenge them in order to make a change in classroom practices. It can also heighten self-awareness which in time leads to making correct decisions for both students and professors in selecting the right path for education. Another implication of this study is that professors and students can benefit from the findings of a metaphor analysis on their beliefs and try to alter the way they conduct the class and act according to the accepted guidelines of *cognitive* and *situative* perspectives.

Since in this study gender and age of the participants were not taken into account, another study is needed to study these points. Moreover, this study was conducted in few universities in Iran, while more research can take place in the universities located in other cities of Iran to compare the results.

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Table1. The frequency and percentage of metaphors produced by MA students about professors in the current situation.

BEH.	f/p	COG.	f/p	SIT.	f/p
Soccer player	1/ 3.7%	Facilitator	1/ 12.5%	Torch	1/ 11.1%
Window	1/ 3.7%	Mother	1/ 12.5%	Guide	4/ 44.4%
Computer	1/ 3.7%	Parent	1/ 12.5%	Conductor	1/ 11.1%
Doctor	1/ 3.7%	Guide	1/ 12.5%	Leader	1/ 11.1%
Source of knowledge	1/ 3.7%	Team leader	1/ 12.5%	Gardener	1/ 11.1%
Dictator	3/ 11.1%	Leader	1/ 12.5%	Fisherman	1/ 11.1%
Chatter box	1/ 3.7%	Knowledgeable guide	1/ 12.5%		
Reflector	1/ 3.7%	Captain	1/ 12.5%		
Provider	1/ 3.7%				
Vacuum cleaner	1/ 3.7%				
Typical teacher	3/ 11.1%				
Manager	1/ 3.7%				
Stone	1/ 3.7%				
Responder	1/ 3.7%				
Comprehensive book	1/ 3.7%				
Money maker	1/ 3.7%				
Repeat subjects	1/ 3.7%				
Robot	1/ 3.7%				
Cassette player	1/ 3.7%				
Clergy man	1/ 3.7%				
Radical feminist	1/ 3.7%				
Up to date teacher	1/ 3.7%				
Watch	1/ 3.7%				
Total	27/ 61.3%	Total	8/ 18.1%	Total	9/ 20.4%

Table 2. The frequency and percentage of the metaphors produced by MA students about professors in the ideal situation.

BEH.	f/p	COG.	f/p	SIT.	f/p
Book	1/ 20%	Honest leader	1/ 5.5%	Friendly supporter	1/ 4.1%
Guide	1/ 20%	Coach	1/ 5.5%	Friend	1/ 4.1%
Gate keeper	1/ 20%	Protector	1/ 5.5%	Tour leader	1/ 4.1%
Up to date teacher	1/ 20%	Supporter	1/ 5.5%	Consultant	1/ 4.1%
Energetic manager	1/ 20%	Prophet	1/ 5.5%	Sun	2/ 8.3%
		Mountaineering coach	1/ 5.5%	Leader	1/ 4.1%
		Parent	2/ 11.1%	Fast vehicle	1/ 4.1%
		Friend	5/ 27.7%	Fair professor	1/ 4.1%
		Leader	1/ 5.5%	Source of energy	1/ 4.1%
		Innovator		Gardener	1/ 4.1%
		Preacher		Up to date researcher	2/ 8.3%
		Captain		Candle	4/ 16.6%
		Mother		Democrat teacher	1/ 4.1%
				Guide	1/ 4.1%
				Light	1/ 4.1%
				Manager	2/ 8.3%
				Conductor	1/ 4.1%
				Liquid	1/ 4.1%
				Psychologist	1/ 4.1%
				Sociologist	1/ 4.1%
				Counselor	1/ 4.1%
				Humanistic guide	1/ 4.1%
				Spark	1/ 4.1%
Total	5/ 10.6%	Total	18/ 38.2%	Total	24/ 51.06%

Table 3. The frequency and percentage of the metaphors produced by MA students about students in the current situation.

BEH.	f/p	COG.	f/p	SIT.	f/p
Early child	1/ 3.2%	Active receiver	1/ 14.2%	Seeker	2/ 28.5%
Photographer	1/ 3.2%	Orchestrate member	1/ 14.2%	Analyst	1/ 14.2%
Receiver	3/ 9.6%	Baby	2/ 28.5%	Eager traveler	1/ 14.2%
Recipient	2/ 6.4%	Interested in knowledge	1/ 14.2%	Researcher	1/ 14.2%
sheep	4/ 12.9%	Friend	1/ 14.2%	Explorer	1/ 14.2%
Kid	1/ 3.2%	Child	1/ 14.2%	Root of tree	1/ 14.2%
Robot	2/ 6.4%				
Sophisticated computer	1/ 3.2%				
Tape recorder	1/ 3.2%				
Waste basket	1/ 3.2%				
Pat and mat	1/ 3.2%				
School student	1/ 3.2%				
Hen-pecked husband	1/ 3.2%				
Employee	2/6.4 %				
Person in dark	1/ 3.2%				
Worker	2/ 6.4%				
Memorizing machine	1/ 3.2%				
Seek certificate	1/ 3.2%				
Present body	1/ 3.2%				
Owl	1/ 3.2%				
Cow	1/ 3.2%				
Book worm	1/ 3.2%				
Total	31/ 68.8%	Total	7/ 15.5%	Total	7/ 15.5%

Table 4. The frequency and percentage of the metaphors produced by MA students about students in the ideal situation.

BEH.	f/p	COG.	f/p	SIT.	f/p
Lovely doll	1/ 20%	Swiss watch	1/ 12.5%	Novice explorer	1/ 4.1%
Magnet	1/ 20%	Baby	2/ 20%	Challenger	1/ 4.1%
Studios person	1/ 20%	Young bird	1/ 12.5%	Critical thinker	3/ 12.5%
Postman	1/ 20%	Friend	1/ 12.5%	Motivated researcher	4/ 16.6%
Clock	1/ 20%	Partner	1/ 12.5%	Director	1/ 4.1%
		Activist	1/ 12.5%	Healthy digestive system	1/ 4.1%
		Player	1/ 12.5%	Thirsty explorer	1/ 4.1%
				Defect detector	1/ 4.1%
				First class passenger	1/ 4.1%
				Seeker	1/ 4.1%
				Orchestrate member	1/ 4.1%
				Free to choose materials and teachers	1/ 4.1%
				Artist	1/ 5.8%
				Politician	1/ 4.1%
				Soldier	1/ 4.1%
				Small seed	1/ 4.1%
				Mountain climber	1/ 4.1%
				Traveler	1/ 4.1%
				Community member	1/ 4.1%
Total	5/ 13.5%	Total	8/ 21.6%	Total	24/ 64.8%