Prospective teachers’ conceptions of teaching and learning revealed through metaphor analysis

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Abstract

This study investigated the metaphors that prospective teachers in Turkey (N = 1,142) formulated to describe the concept of “teacher”. Participants completed the prompt “A teacher is like... because...” by focusing on only one metaphor to indicate their conceptualization of teaching and learning. Altogether 64 valid personal metaphors were analyzed and 10 main conceptual themes were identified. Significant associations were detected between participants’ gender and study program type and six of the conceptual themes. Metaphors seem to provide a powerful cognitive tool in gaining insight into prospective teachers’ professional thinking.

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1. Introduction

Shuell’s (1990: 102) claim that “If a picture is worth 1,000 words, a metaphor is worth 1,000 pictures! For a picture provides only a static image while a metaphor provides a conceptual framework for thinking about something” elegantly captures the essence of Lakoff and Johnson’s (1980) “cognitive theory of metaphor”. These authors suggest that far from being a mere figurative or decorative device (i.e., substitution theory) or simply an elliptical simile (i.e., comparison theory), metaphors structure our perceptions, thoughts, and actions—see Schnitzer and Pedreira (2005) for a brief overview of contemporary approaches to metaphor. From the standpoint of the “cognitive theory”, metaphors act as powerful mental models through which people understand their world by relating complex phenomena to something previously experienced and concrete. It is indeed this process of building linkages between two dissimilar ideas (the concrete and the abstract) or the projection of one schema (the source domain of the metaphor) onto another schema (the target domain of the metaphor) that makes a metaphor an effective cognitive device.

To put it in Yob’s (2003: 134) words, “Metaphor is employed when one wants to explore and understand something esoteric, abstract, novel, or highly speculative. As a general rule, the more abstract or speculative it is, the greater the variety of metaphors needed to grapple with it”. In this regard, metaphor invites researchers to explore comparisons,
notice similarities, and use a situation as an image of another. Metaphor acts as a lens, a screen, or a filter through which a subject is (re)viewed and becomes a mental model for thinking about something in light of another. The metaphorical expression of “a teacher is a gardener”, for instance, refers not just to what teachers are like, but indeed to “what it is like to be a teacher”.

Using the popular movie The Matrix as a point of reference, for example, Cook-Sather (2003) discussed two main metaphors that have dominated the notions and practices of formal schooling in the United States since early in its history. These are education as production and education as cure, both of which characterize schools as forms of social control and cast students in a dependent role as either a raw material to be manufactured or a diseased creature in need of remedy. The overarching metaphor of “education as production”, for instance, generates a whole set of associated metaphors such as school as factory, teacher as factory worker, curriculum as assembly line, and student as product. On the other hand, the root metaphor of “education as cure” formulates a set of related metaphors such as school as hospital, curriculum as prescription, teacher as doctor, and student as sick patient. Within these two conceptual frameworks, according to the author, there is no incentive to attend to whether or not learning is meaningful and satisfying for the students.

Yet, a metaphor is not simply an analogical tool by which we try to understand something by comparing it to something else. Once expressed, it also projects a form of argument or a genuine preference for something over another. Recently, for example, medicine is now being increasingly perceived as a “service”, “what was once seen as a calling [profession]… based on compassion” (Mustacchi & Krevans, 2001: 14). This new metaphor of “health care is a factory and health care delivery is the commodity being produced” views the patient as “a ‘consumer’—someone who consumes a commodity” and the doctor as “the purveyor of a product to be consumed” (Mustacchi & Krevans, 2001: 15). Within the same line of metaphors, more than two decades ago, Kliebard (1982: 15) called educators’ attention and cautioned: “To see the school as if it were a factory and the curriculum as a means of production is not merely to make an observation; that metaphor has imbedded in it an element of persuasion, and one who is not critically aware of the power of metaphor can easily become its victim”.

1.1. Metaphors about teaching and learning

The research literature on metaphors about teaching and learning is quite vast in scope. Inbar (1996) collected and categorized over 7000 metaphorical images of what the teacher, the learner, the principal, and the school are. According to this study, about 18% of the educators perceived students as “empty receptacles” (e.g., student as jar, bottle, container, or cup) while only 7% of students’ own images came from this group. Again, about one-tenth of the educators’ (10.1%) metaphors involved images of the student as “clay in the potter’s hands” (e.g., student as clay, toothpaste, chewing-gum, or dough) while only about 3% of the students’ metaphors reflected this conception. Perhaps a more disturbing and critical finding of the study was that about 33% of the students and 8% of the educators conceptualized the learner as the “captive student” (e.g., student as slave, servant, prisoner, or trapped bird). It appears from these data that most of the educators in the study tended to perceive themselves more in a caring role while the majority of the students tended to focus more on the evaluative and controlling aspects of teaching.

Mahlios and Maxson (1998) investigated elementary and secondary teacher-education students’ perceptions of their schooling experiences. When asked to choose from a list of metaphors (i.e., family, team, garden, circus, prison, zoo, stages, crowd, and factory), most of the elementary teacher-education students remembered their elementary school experiences as being in a family (52%) or in a team (24%). The same students remembered their secondary school experiences in a more diverse manner (i.e., family 25%, team 23%, crowd 18%, prison 12%), although their preferred secondary school metaphors were more focused on being in a family (43%) and being in a team (43%). Likewise, secondary teacher-education students remembered their elementary school experiences as being in a family (49%), in a garden (9%), or in a team (8%). Their preferred secondary school metaphors were more focused on being in a team (50%) and being in a family (17%). Thus, elementary teacher-education students preferred family-like secondary school metaphors in comparison to their secondary teacher-education peers.

Martinez, Sauleda, and Huber (2001) analyzed the metaphorical conceptions of teaching and learning coming from experienced elementary school teachers and fourth-year teacher-education students. The findings of the study were analyzed according to three theoretical perspectives: (1) the behaviorist perspective, which perceives learning as a passive process of knowledge acquisition, (2) the cognitive perspective, which views learning as an individual process of
schemata construction, and (3) the socio-cultural perspective, which conceives learning as an authentic participation in the activities of a social community. The results indicated that the majority of both experienced teachers (57%) and prospective teachers (56%) shared traditional metaphors depicting teaching and learning as transmission of knowledge. About 38% of experienced teachers and 22% of prospective teachers expressed constructivist metaphors (e.g., “Learning is like a detective who looks for things and into things”). While only 5% of the metaphors of experienced teachers conceived teaching and learning as a social process (e.g., “Teaching is like a tourist guide who negotiates a route with the tourists”), 22% of prospective teachers’ metaphors reflected this conceptual theme.

Bozlk (2002) asked first-year college students to create metaphors for themselves as learners at four points during an academic year. The metaphors were then analyzed and categorized into four main groups: (1) animal metaphors (e.g., snail, fish), (2) object metaphors (e.g., sponge, crayon), (3) human metaphors (e.g., toddler, entrepreneur), and (4) action metaphors (e.g., drying a counter). According to Bozlk (2002) the data seem to suggest that most students come to higher education seeing themselves as passive learners, like sponges so as to say, ready to soak up the teacher’s knowledge. Likewise, with regard to the success or failure of retaining information, again many students expressed difficulty in retaining their information once they acquire it (e.g., a person with Alzheimer’s disease).

More recently, Ben-Peretz, Mendelson, and Kron (2003) investigated vocational education teachers’ images of their professional self in different work contexts. They asked them to match the images of themselves as teachers with seven drawings of other occupations (i.e., shopkeeper, judge, animal keeper, entertainer, conductor, puppeteer, and animal trainer) and to comment on their choices. Half of the teachers taught Group 1 (high-achieving) students and the other half taught Group 2 (low-achieving) students. According to the results, out of the three dominant pictorial metaphors (i.e., animal keeper, conductor, and shopkeeper), more than one-third of all teachers (35%) chose the “animal keeper” metaphor, and the Group 2 teachers preferred this choice the most. About 30% of all teachers chose the “conductor” metaphor, with the Group 1 teachers leaning more towards this choice. The third most popular choice was “shopkeeper” (23.3%), and both Group 1 and Group 2 teachers chose this metaphor about the same.

It can be concluded, then, that metaphors can reveal a multitude of teaching and learning conceptions. Furthermore, being a student or a professional teacher, or focusing on elementary or secondary education seems to be a factor that differentiates such conceptions. Our study aimed at investigating the metaphors of teacher-education students in a socio-cultural context that possibly differs from this of the countries in which the previous studies were carried out. We also intended to identify possible effects of gender, study program (elementary vs. secondary vs. technological education) and level of studies (entry or graduating). These factors were not extensively studied in previous studies.

1.2. Aims — hypotheses

Having the Turkish socio-cultural context as background, the study had the following aims: (1) to identify the metaphors that teacher-education students use to describe the concept of “teacher”, (2) to explore the categories in which these metaphors are organized and the conception of “teaching and learning” they represent, (3) to reveal the possible relations between the dominant conceptual themes and the participants’ class levels, gender, and programs of study, and finally, (4) to relate the conceptual themes identified with those of other socio-cultural contexts.

Due to the nature of the study, it was not possible to state exact hypotheses. However, we assumed that some of the dominant metaphors of teaching and learning identified in the extant studies would be present in our sample also. For example, the metaphor of students as receptacles that is based on the idea of teaching as knowledge transmission and learning as knowledge acquisition were expected to be dominant. On the other hand, we anticipated that such traditional notions of teaching as competition (racing students through exams), disciplining (punishing students for their misbehaviors and academic failures), or standardization (assembling students through a fixed curriculum) would be less common, because at present, the Turkish education system undergoes a shift from a highly teacher-centered to a more learner-centered schooling structure.

Furthermore, we assumed that the three independent variables (i.e., gender, class level, and program type) would have a significant impact on prospective teachers’ metaphors about teaching and learning. Thus, in terms of gender, we predicted that female participants would produce more growth-oriented metaphorical images than their male peers, as was also the case in a previous study of Turkish prospective elementary teachers. According to Saban (2004), contrary to males, more graduating female teacher candidates picked the baby-sitter and gardener metaphors as their most representative professional images of self as a future teacher.
With regard to class level, we predicted that the exit level teacher-education students would generate more student-centered metaphorical images than the entry level teacher candidates. For example, it has been reported that while about one-third of the 381 entry level prospective elementary teachers (31.5%) picked the factory metaphor (depicting students as raw materials and teachers as manufacturers) as their most preferred metaphorical image of elementary schooling (see Saban, 2003), only 14.3% of the 385 exit level elementary teacher candidates chose this metaphor (see Saban, 2004). There is no data, to our knowledge, regarding preferred metaphors in different study programs. For this reason, no exact hypothesis was stated to this respect.

2. Method

2.1. Participants

The participants were 1142 teacher-education students enrolled in three different study programs of the Faculty of Education of the Selcuk University in Turkey. Classroom Teaching (CT) students, that is, elementary school teaching, constituted the largest group (n = 624; 54.6%), followed by English Education (EE) students (n = 325; 28.5%) and Instructional Technologies (IT) students (n = 193; 16.9%). Altogether 455 males (39.8%) and 687 females (60.2%) participated in the study. The distribution of gender across the three different programs was as follows: 253 males (40.5%) and 371 females (59.5%) in the CT program; 88 males (27.1%) and 237 females (72.9%) in the EE program; and 114 males (59.1%) and 79 females (40.9%) in the IT program. There were about equal number of students in each class level. The entry level students were 258 (22.6%) and exit level students were 305 (26.7%). Finally, the participants’ age ranged from 17 to 26 years (M = 19.73 years, SD = 1.40).

2.2. Data collection process

We collected our data during the 2004–2005 academic year by using the prompt “A teacher is like… because…” We distributed a blank piece of paper to the participants with this prompt on top of the page and asked them to complete it by focusing on only one metaphor. We also solicited demographic data, that is, gender, class level, and program type. The participants were given one class-hour (roughly 45 min) to write about a metaphorical image that represented their professional thinking. We did so because we were interested in their immediate reactions to the “teacher” concept rather than exhaustive essays on it. The resemblance between the metaphor topic (teacher) and the metaphor vehicle (the required response) was emphasized through the use of the word “like”. The resemblance was expected to be clarified through the use of the word “because”. In this way we expected participants to make their implicit beliefs explicit.

2.3. Data analysis process

In the beginning of the study, there were a total of 1367 participants, with about the same distribution as in our final sample in terms of program type, class level, and gender. During the data analysis process we eliminated about 225 papers for methodological reasons. The analysis of the data followed the methodology of metaphor analysis (Moser, 2000). According to Moser (2000), metaphor analysis is essentially a qualitative research methodology related to content analysis, but it also allows researchers to apply quantitative procedures on the categorical data, resulting from the uncovering of the meanings and reasoning beneath those consciously set forth by the participants in each metaphorical relationship. The analysis of the metaphors in the present study encompassed the following stages and actions: (1) naming/labeling stage, (2) sorting (clarification and elimination) stage, (3) deciding the unit of analysis, (4) sample metaphor compilation and categorization stage, (5) establishing the inter-rater reliability rate, and (6) analyzing data quantitatively.

2.3.1. Naming/labeling stage

In the first stage, using the Microsoft-Word program we made a preliminary (temporary) alphabetical list of all the metaphors supplied by the participants. In this step, we simply coded the name of the metaphor (such as baker, coach, farmer). If we could not identify a metaphor in a participant’s response or in the event that the participant did not write anything at all, we marked the paper as either “description” or “no metaphor at all”.

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2.3.2. Sorting (clarification and elimination) stage

In the second stage, we went through the raw data again and analyzed each metaphor to characterize its elements: (1) the topic, (2) the vehicle, and (3) the ground. The topic is the subject of the metaphor (i.e., in our case teacher). The vehicle is the term to which the topic is compared, and the ground refers to the nature of the relationship between the topic and the vehicle. By using this approach, we were able to break down each metaphor into analyzable parts, looking for salient features/images, common elements, and similarities among the various metaphors.

Not every student produced an analyzable valid metaphor. At this stage, we eliminated a total of 145 poorly structured papers based on the following four criteria:

A. Plain description or no mention of a metaphor at all. For example: “Teaching requires a great amount of self-sacrifice on the part of the teacher”.

B. Mention of a metaphor but no provision of a rationale. For example: “A teacher is like the ozone layer”.

C. Fuzzy/hybrid metaphor or difficulty placing the metaphor under one clearly recognizable conceptual theme. For example: “A teacher is like a discoverer. S/he struggles to discover his/her students’ inner worlds and feeds them by his/her eternal knowledge…”, “A teacher is like a savior and the students are like the people remaining under the wreckage of an educational building. Those students who could ask for help are saved with the teacher’s endless knowledge while many others die out because they could not raise their voices…”, or “A teacher is like the blood in our body. Throughout our school life, the teacher (blood) provides us with the knowledge, love and tenderness, or the light that we need to survive…” These metaphors reflect the conception of teacher as provider of knowledge, however, mixed with other elements of teaching such as discovery of ignorance, salvation of those in danger—but only for those who want to be saved—and teaching as nurture and scaffolding.

D. Idiosyncratic metaphors. For example: “Teachers are like shoes because we need them every day”.

2.3.3. Deciding the unit of analysis

After eliminating 145 papers in the second stage, we identified a total of 111, what we called, “well-articulated metaphors”. Before organizing these metaphors into particular conceptual themes, we brainstormed about the unit of analysis, that is, the least number of metaphors needed for the formation of a category. Thus, in face of the needs of the statistical analyses regarding gender, program type, and class level, we decided to adopt the following criteria: categories should be based on metaphors that were mentioned (a) by more than one participant, (b) by participants from at least two different programs, and (c) by both male and female participants. As a result of these criteria, we eliminated 47 more metaphors, which were generated by a total of 80 participants (approximately 6%). It should be pointed out that each eliminated metaphor corresponded fairly well to one or more of the characteristics constituting the conceptual categories that were derived from the remaining 64 metaphors. Thus, all the views and ideas of the participants whose metaphors were excluded were in essence represented in the conceptual categories that were finally adopted.

2.3.4. Sample metaphor compilation and categorization stage

In the fourth stage, we reorganized the remaining 64 metaphors (again in alphabetical order) and reviewed the raw data for the fourth time in order to choose a sample expression that represented each metaphor. Students’ metaphors contained varying degrees of detail. Some were explained by one sentence the most, whereas many others were elaborated extensively (to a length of one hand-written page or more). For this reason, we first picked the one phrase expression that we believed represented the specific metaphor best. Also, in the event that the metaphorical expression was too long, we only took the most important features of it and used three dots (…) consecutively to represent the unnecessary and eliminated words, sentences, and/or paragraphs. Thus, we produced a list of the 64 metaphors with a verbal description (title) for each metaphor in order (a) to use it as a reference point for the grouping of the metaphorical images into certain categories and (b) to validate our analysis and interpretations of the data of the study. The list was necessary for the cross-tabulation of students’ metaphors as a function of study program, class level, and gender.

Our ultimate aim in the fourth stage was to abstract from the 64 exemplar metaphors the conceptual themes or categories that they represented. In this regard, we used Schon’s (cited in Vadeboncoeur & Torres, 2003) distinction between two types of metaphors: (1) generative metaphors and (2) surface metaphors. According to Vadeboncoeur
and Torres (2003: 89), “[A] generative metaphor provides a set of assumptions that establish a way of seeing” whereas a group of surface metaphors provides us “with clues to unveil the deep generative metaphor”. As far as our study is concerned, the individual metaphors formulated by the participants represent the surface images of a teacher while the conceptual themes represent the generative categories. During this stage, we coded each metaphor so that it could fit into a conceptual theme (e.g., knowledge transmission, learning facilitation). For this purpose, we looked for those predominant characteristics/features of the metaphors that would determine which conceptual category or theme the participants’ metaphors best represented. As a result of our inductive analysis, 10 major categories were identified. Overall, the development of these categories was guided (a) by the pertinent research literature (see Cook-Sather, 2003; Guerrero & Villamil, 2002; Oxford et al., 1998) and (b) by the hand-written metaphorical expressions of the participants. Each exemplar metaphor, for instance, corresponded to one or more of the characteristics of the category it represented.

2.3.5. Establishing the inter-rater reliability rate

Inter-rater reliability assesses the consistency of a coding system being implemented in a research. In our study, we (the three researchers) tackled the whole data set together from the beginning of our data analysis process. All decisions were based on discussions so that consensus was reached. However, since the critical step of the analytical process was the abstraction of the 10 generative categories and the classification of the 64 exemplar metaphors into the 10 categories, two outside researchers (colleagues in the Faculty of Education) were asked to independently sort the metaphors into the 10 categories. For this purpose, we provided each coder (a) with the list of the 64 exemplar metaphors, organized in alphabetical order, and including a sample expression for each metaphor (see Appendix for sample metaphorical expressions) and (b) with a second list presenting randomly the 10 conceptual categories that we had developed, also including a short description for each category. We then asked each coder to read each metaphor expression and place it in one of the 10 conceptual categories the specific metaphor could fall into. We reminded them that the conceptual category was mutually exclusive and so each metaphor could be assigned to only one category. We also asked them not to leave any of the 64 metaphors out. The coders were familiar with the research literature on metaphors, but had not done or published any study on metaphors themselves.

To estimate the inter-rater reliability rate, we used Miles and Huberman’s (1994) formula (i.e., Reliability = Agreement/Agreement + Disagreement). Accordingly, the 64 metaphors were classified by the two independent coders and the level of agreement between their individual ratings and ours was 0.98. Miles and Huberman (1994) suggest that the final inter-coder agreement rate in qualitative data analysis should approach or exceed 90%. In our study, one coder placed the parent metaphor under the eighth conceptual category (Teacher as Nurturer/Cultivator) rather than under the seventh (Teacher as Counselor)—i.e., reliability: 63/63 + 1 = 0.98—while the other coder put the soil metaphor under the seventh category instead of the eighth.

2.3.6. Analyzing data quantitatively

In the last stage, we entered the study data into the SPSS program to calculate counts/frequencies (f) and percentages (%) of the metaphors in each category as well as to compare, using chi-square, our dominant metaphorical themes across the three different study programs, the four class levels, and gender.

3. Results

In this section, we first introduce the 10 conceptual categories we abstracted from the metaphors and highlight their main characteristics. Example metaphors for each category are given in Appendix. Then, we present the analyses regarding the effects of the participants’ gender, class level, and program type on metaphor preference.

3.1. Main conceptual categories

3.1.1. Teacher as knowledge provider (student as passive recipient of knowledge)

Altogether, there were 300 students (26.3%) and 15 metaphors (23.4%) under this category and the following five metaphors were dominant: (1) sun (8.4%), (2) candle (5.4%), (3) tree/fruit tree (3.4%), (4) light (1.6%), and (5) flower (1.5%) (see Table 1). In this category of metaphors, the teacher is viewed as both the source (e.g., computer, flower, tree) and the transmitter or deliverer of knowledge (e.g., candle, light, shopkeeper), whereas the students are passive
recipients of knowledge (e.g., jug, rain). The teacher’s knowledge is endless (e.g., fountain, spring, sun). Also, knowledge is seen as a product (e.g., book, television) or as means of learning (e.g., pen, writer/poet)—it is information alone that constitutes learning. From the standpoint of this conceptual theme, learning is viewed as a process of acquiring and accumulating knowledge, which is something external to the students and is transferred to them by the teachers.

3.1.2. Teacher as molder/craftsperson (student as raw material)

Altogether there were 277 students (24.3%) and 17 metaphors (26.5%) under this category (see Table 2). The following five metaphors were dominant: (1) sculptor (7.3%), (2) painter (3.1%), (3) constructor (1.9%), (4) baker...

<p>| Table 1 | Teacher as knowledge provider (student as passive recipient of knowledge) |</p>
<table>
<thead>
<tr>
<th>Metaphor name</th>
<th>CT f (%)</th>
<th>EE f (%)</th>
<th>IT f (%)</th>
<th>Total f (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun</td>
<td>44 (7.1)</td>
<td>33 (10.2)</td>
<td>19 (9.8)</td>
<td>96 (8.4)</td>
</tr>
<tr>
<td>Candle</td>
<td>37 (5.9)</td>
<td>19 (5.8)</td>
<td>6 (3.1)</td>
<td>62 (5.4)</td>
</tr>
<tr>
<td>Tree/fruit tree</td>
<td>22 (3.5)</td>
<td>12 (3.7)</td>
<td>5 (2.6)</td>
<td>39 (3.4)</td>
</tr>
<tr>
<td>Light</td>
<td>6 (1.0)</td>
<td>7 (2.2)</td>
<td>5 (2.6)</td>
<td>18 (1.6)</td>
</tr>
<tr>
<td>Flower</td>
<td>14 (2.2)</td>
<td>3 (0.9)</td>
<td>—</td>
<td>17 (1.5)</td>
</tr>
<tr>
<td>Computer</td>
<td>3 (0.5)</td>
<td>—</td>
<td>10 (5.2)</td>
<td>13 (1.1)</td>
</tr>
<tr>
<td>Television</td>
<td>3 (0.5)</td>
<td>2 (0.6)</td>
<td>6 (3.1)</td>
<td>11 (1.0)</td>
</tr>
<tr>
<td>Book</td>
<td>7 (1.1)</td>
<td>2 (0.6)</td>
<td>1 (0.5)</td>
<td>10 (0.9)</td>
</tr>
<tr>
<td>Pen</td>
<td>5 (0.8)</td>
<td>1 (0.3)</td>
<td>1 (0.5)</td>
<td>7 (0.6)</td>
</tr>
<tr>
<td>Spring</td>
<td>5 (0.8)</td>
<td>1 (0.3)</td>
<td>—</td>
<td>6 (0.5)</td>
</tr>
<tr>
<td>Jug</td>
<td>4 (0.6)</td>
<td>—</td>
<td>1 (0.5)</td>
<td>5 (0.4)</td>
</tr>
<tr>
<td>Fountain</td>
<td>3 (0.5)</td>
<td>2 (0.6)</td>
<td>—</td>
<td>5 (0.4)</td>
</tr>
<tr>
<td>Rain</td>
<td>2 (0.3)</td>
<td>3 (0.9)</td>
<td>—</td>
<td>5 (0.4)</td>
</tr>
<tr>
<td>Writer/poet</td>
<td>1 (0.2)</td>
<td>3 (0.9)</td>
<td>—</td>
<td>4 (0.4)</td>
</tr>
<tr>
<td>Shopkeeper</td>
<td>1 (0.2)</td>
<td>1 (0.3)</td>
<td>—</td>
<td>2 (0.2)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>157 (25.2)</strong></td>
<td><strong>89 (27.4)</strong></td>
<td><strong>54 (28)</strong></td>
<td><strong>300 (26.3)</strong></td>
</tr>
</tbody>
</table>

| Metaphor | 15 (23.4) | 13 (22.7) | 9 (20) | 15 (23.4) |

CT, Classroom Teaching; EE, English Education; IT, Instructional Technologies.

<p>| Table 2 | Teacher as molder/craftsperson (student as raw material) |</p>
<table>
<thead>
<tr>
<th>Metaphor name</th>
<th>CT f (%)</th>
<th>EE f (%)</th>
<th>IT f (%)</th>
<th>Total f (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sculptor</td>
<td>48 (7.7)</td>
<td>23 (7.1)</td>
<td>12 (6.2)</td>
<td>83 (7.3)</td>
</tr>
<tr>
<td>Painter</td>
<td>21 (3.4)</td>
<td>7 (2.2)</td>
<td>7 (3.6)</td>
<td>35 (3.1)</td>
</tr>
<tr>
<td>Constructor</td>
<td>13 (2.1)</td>
<td>6 (1.8)</td>
<td>3 (1.6)</td>
<td>22 (1.9)</td>
</tr>
<tr>
<td>Baker</td>
<td>12 (1.9)</td>
<td>5 (1.5)</td>
<td>3 (1.6)</td>
<td>20 (1.8)</td>
</tr>
<tr>
<td>Potter</td>
<td>10 (1.6)</td>
<td>2 (0.6)</td>
<td>4 (2.1)</td>
<td>16 (1.4)</td>
</tr>
<tr>
<td>Honeybee</td>
<td>9 (1.4)</td>
<td>4 (1.2)</td>
<td>1 (0.5)</td>
<td>14 (1.2)</td>
</tr>
<tr>
<td>Cook</td>
<td>7 (1.1)</td>
<td>5 (1.5)</td>
<td>2 (1.0)</td>
<td>14 (1.2)</td>
</tr>
<tr>
<td>Jeweler</td>
<td>9 (1.4)</td>
<td>3 (0.9)</td>
<td>—</td>
<td>12 (1.1)</td>
</tr>
<tr>
<td>Tailor</td>
<td>7 (1.1)</td>
<td>5 (1.5)</td>
<td>—</td>
<td>12 (1.1)</td>
</tr>
<tr>
<td>Carpenter</td>
<td>6 (1.0)</td>
<td>3 (0.9)</td>
<td>2 (1.0)</td>
<td>11 (1.0)</td>
</tr>
<tr>
<td>Architect</td>
<td>6 (1.0)</td>
<td>4 (1.2)</td>
<td>—</td>
<td>10 (0.9)</td>
</tr>
<tr>
<td>Miner</td>
<td>2 (0.3)</td>
<td>3 (0.9)</td>
<td>1 (0.5)</td>
<td>6 (0.5)</td>
</tr>
<tr>
<td>Weaver</td>
<td>2 (0.3)</td>
<td>2 (0.6)</td>
<td>2 (1.0)</td>
<td>6 (0.5)</td>
</tr>
<tr>
<td>Ironworker</td>
<td>3 (0.4)</td>
<td>1 (0.3)</td>
<td>1 (0.5)</td>
<td>5 (0.4)</td>
</tr>
<tr>
<td>Contractor</td>
<td>2 (0.3)</td>
<td>2 (0.6)</td>
<td>—</td>
<td>4 (0.4)</td>
</tr>
<tr>
<td>Technician</td>
<td>1 (0.2)</td>
<td>—</td>
<td>3 (1.6)</td>
<td>4 (0.4)</td>
</tr>
<tr>
<td>Mill</td>
<td>1 (0.2)</td>
<td>2 (0.6)</td>
<td>—</td>
<td>3 (0.3)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>159 (25.5)</strong></td>
<td><strong>77 (23.7)</strong></td>
<td><strong>41 (21.2)</strong></td>
<td><strong>277 (24.3)</strong></td>
</tr>
</tbody>
</table>

| Metaphor | 17 (26.5) | 16 (28.0) | 12 (26.6) | 17 (26.5) |

CT, Classroom Teaching; EE, English Education; IT, Instructional Technologies.
(1.8%), and (5) potter (1.4%). In this category of metaphors, the teacher is perceived to be a highly skilled individual or master (e.g., cook, potter, sculptor) whose main task is to produce students as socially useful products (e.g., honeybee, mill, technician), while the student is conceived as a raw material (e.g., baker, carpenter, miner). The student merely supplies the raw material while the teacher does all the molding, shaping, and manufacturing (e.g., architect, ironworker, weaver). Also, this category of metaphors casts the student as something inanimate and something that can take shape (e.g., clay). Within this conceptual theme, the job of the teacher is to educate students through a standardized curriculum (e.g., jeweler, tailor) with a set of common goals, principles and values (e.g., constructor, contractor, painter).

3.1.3. Teacher as curer/repairer (student as defective individual)

Altogether there were 21 students (1.8%) and three metaphors (4.7%) under this category (see Table 3). No metaphor in this category appeared to be dominant. Overall, this conceptual category compares the profession of teaching with that of medicine. Medical practice comprises two essential components, namely, diagnosis and cure. Following the medical analogy, the activities of diagnosis and cure form the heart of teaching (i.e., diagnosing and curing the educational ills of ignorance, prejudice, misbehavior, and distorted attitudes). The teacher is then the one who knows what is correct or not (e.g., doctor, mechanic), and hence his or her main duty is that of fixing students’ errors and deficiencies (e.g., medicine).

3.1.4. Teacher as superior authoritative figure (student as absolute compliant)

There were 29 students (2.5%) and four metaphors (6.3%) altogether under this category (see Table 4). Only one metaphor in this category (i.e., shepherd) appeared to be dominant appealing to 13 students (1.1%). This conceptual category puts the teacher in a superior, authoritative position (e.g., brain), while the student is an absolute compliant (e.g., locomotive). The metaphors of this category reflect the teachers’ various forms of control and power over the teaching-learning process (e.g., shepherd, ship captain). Moreover, the classroom environment implies a set of power relationships in which the teacher has more authority than the students.

3.1.5. Teacher as change agent (student as object of change)

Altogether six students (0.5%) and two metaphors (3.1%) belonged to this conceptual category, with no metaphor being dominant (see Table 5). This conceptual category represents some of the most important reasons (e.g., “To contribute to the future of society” or “To make a difference in children’s lives”) why some individuals choose to enter the teaching profession. The teacher is viewed as a social agent who can bring about change in learners (e.g., scriptwriter), while the student is viewed as a disadvantaged or problematic human being who is expected to be transformed into the kind of an individual his/her teacher envisions (e.g., fashion designer). Teaching is then a genuine activity of bringing about change in both the students’ and the society’s future.

3.1.6. Teacher as entertainer (student as conscious observant)

There were 20 students (1.8%) and two metaphors (3.1%) altogether under this category (see Table 6). While the metaphor actor/actress appealed to 17 (1.5%) participants, the stand-up comedian metaphor appealed to only three students (0.2%). In this category of metaphors, the teacher takes the role of an amuser (e.g., stand-up comedian) who can make people happy for a period of time without demanding too much effort from them. The teacher also

<table>
<thead>
<tr>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher as curer/repairer (student as defective individual)</td>
</tr>
<tr>
<td>Metaphor name</td>
</tr>
<tr>
<td>Doctor</td>
</tr>
<tr>
<td>Medicine</td>
</tr>
<tr>
<td>Mechanic</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Student</td>
</tr>
<tr>
<td>Metaphor</td>
</tr>
</tbody>
</table>

CT, Classroom Teaching; EE, English Education; IT, Instructional Technologies.
uses acting (e.g., actors/actresses) as part of instruction in an effort to break down affective barriers that prevent communication and active participation on the part of the students.

3.1.7. Teacher as counselor (student as significant other)

There were 91 students (8%) and four metaphors (6.3%) altogether under this category (see Table 7). Two metaphors appeared to be dominant: (1) parent (5.9%) and (2) friend (1.2%). Counseling refers to a teacher’s ultimate concern (e.g., parent) about the emotional and psychological well-being (e.g., psychologist) of his/her students and/or helping (e.g., friend, companion) each learner to find his/her center in life.

3.1.8. Teacher as nurturer/cultivator (student as developing organism)

There were 103 students (9%) and four metaphors (6.3%) altogether under this category and the following two metaphors were dominant: (1) gardener (5.7%) and (2) farmer (1.8%) (see Table 8). In this category of metaphors, the teacher’s main role is to nourish and foster the potential capabilities of each student in a loving and nurturing learning environment; the teacher is a caring person, who adopts various roles to meet the needs of students (e.g., chameleon, farmer). The metaphors in this conceptual theme also postulate that students should be encouraged to learn and grow in their own ways at their own pace. The classroom is conceived as a garden (e.g., soil) where plants (students) grow with the cultivation of gardeners (teachers).

3.1.9. Teacher as facilitator/scaffolder (student as constructor of knowledge)

Altogether there were 212 students (18.6%) and 10 metaphors (15.6%) under this conceptual category (see Table 9). The following five metaphors were dominant: (1) compass (5.8%), (2) lighthouse (5.8%), (3) North Star (2.5%), (4) flashlight (1.1%), and (5) traffic signs (1%). In this category of metaphors, the teacher facilitates (e.g., flashlight, lighthouse, traffic signs) student learning (e.g., ladder, North Star). He/she provides the needed help/scaffolding (e.g., bridge, compass, taxi driver) to students at the appropriate times and removes it when no longer essential. In this regard, the teacher’s main role is to make instructional materials and academic assistance available in the classroom (e.g., road map, torch) so that the students can take responsibility to construct their own knowledge.

---

Table 4
Teacher as superior authoritative figure (student as absolute compliant)

<table>
<thead>
<tr>
<th>Metaphor name</th>
<th>CT f (%)</th>
<th>EE f (%)</th>
<th>IT f (%)</th>
<th>Total f (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shepherd</td>
<td>6 (3.1)</td>
<td>2 (0.6)</td>
<td>13 (1.1)</td>
<td></td>
</tr>
<tr>
<td>Ship captain</td>
<td>2 (1.0)</td>
<td>2 (0.6)</td>
<td>9 (0.8)</td>
<td></td>
</tr>
<tr>
<td>Locomotive</td>
<td>1 (0.2)</td>
<td>—</td>
<td>4 (0.4)</td>
<td></td>
</tr>
<tr>
<td>Brain</td>
<td>2 (1.0)</td>
<td>—</td>
<td>3 (0.3)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>14 (2.2)</td>
<td>4 (1.2)</td>
<td>29 (2.5)</td>
<td></td>
</tr>
</tbody>
</table>

CT, Classroom Teaching; EE, English Education; IT, Instructional Technologies.

Table 5
Teacher as change agent (student as object of change)

<table>
<thead>
<tr>
<th>Metaphor name</th>
<th>CT f (%)</th>
<th>EE f (%)</th>
<th>IT f (%)</th>
<th>Total f (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fashion designer</td>
<td>3 (0.5)</td>
<td>1 (0.3)</td>
<td>—</td>
<td>4 (0.4)</td>
</tr>
<tr>
<td>Scriptwriter</td>
<td>1 (0.2)</td>
<td>1 (0.3)</td>
<td>—</td>
<td>2 (0.2)</td>
</tr>
<tr>
<td>Total</td>
<td>4 (0.6)</td>
<td>2 (0.6)</td>
<td>—</td>
<td>6 (0.5)</td>
</tr>
</tbody>
</table>

CT, Classroom Teaching; EE, English Education; IT, Instructional Technologies.
3.1.10. Teacher as cooperative/democratic leader (student as active participant in a community of practice)

There were 83 students (7.3%) and three metaphors (4.7%) altogether under this category (see Table 10). All the three metaphors in this category were dominant: (1) tour guide (3%), (2) coach (2.3%), and (3) conductor (2%). In this category of metaphors, the teacher is in a position of leadership (e.g., tour guide), and the students are active participants. The teacher and the students are partners in achieving something and construct their knowledge together (e.g., coach). But because the teacher has more experience than the students, it is s/he who coordinates (e.g., conductor) all the learning activities in the classroom.

3.2. Effects of program type, gender, and class level

As shown in Tables 1—10, the distribution of students in the various categories differed. Four categories, namely, Teacher as Curer/Repairer, Teacher as Superior Authority Figure, Teacher as Change Agent, and Teacher as Entertainer, involved a very small number of participants, less than 2.5% of the students. These categories were dropped from further analyses because there were very low (≤5) frequencies in the cells and this rendered $\chi^2$ analysis invalid. Thus, we performed three independent $\chi^2$ analyses to determine if the six main categories were associated with participants’ gender, class level, and program type.

3.2.1. Program type

The $\chi^2$ analysis regarding program type was significant, $\chi^2(10, N = 1,066) = 58.373, p = .000$ (see Table 11). Students in the three study programs conceptualized “teacher” with significantly different metaphorical images. Specifically, the CT students generated more shaping-oriented (i.e., molder/craftsperson: 27.2%), growth-oriented (i.e., nurturer/cultivator: 13.2%), and counseling-oriented (9.2%) metaphors than EE students (25.3%, 6.9%, 8.2%, respectively) and IT students (23.2%, 2.8%, 6.8%, respectively). On the contrary, EE students produced more facilitation-oriented (22%) metaphorical images than the CT students (19.3%) and the IT students (18.1%). Finally, the IT students provided more transmission-oriented (i.e., knowledge provider: 30.5%) and cooperation-oriented (18.6%) metaphorical images than the CT students (26.8%, 4.3%, respectively) and the EE students (29.3%, 8.2%, respectively).

Table 6
Teacher as entertainer (student as conscious observant)

<table>
<thead>
<tr>
<th>Metaphor name</th>
<th>CT f (%)</th>
<th>EE f (%)</th>
<th>IT f (%)</th>
<th>Total f (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actor/actress</td>
<td>9 (1.4)</td>
<td>8 (2.5)</td>
<td></td>
<td>17 (1.5)</td>
</tr>
<tr>
<td>Stand-up comedian</td>
<td>2 (0.3)</td>
<td>1 (0.3)</td>
<td></td>
<td>3 (0.3)</td>
</tr>
<tr>
<td>Total</td>
<td>11 (1.8)</td>
<td>9 (2.8)</td>
<td></td>
<td>20 (1.8)</td>
</tr>
<tr>
<td>Student</td>
<td>2 (3.1)</td>
<td></td>
<td></td>
<td>2 (3.1)</td>
</tr>
<tr>
<td>Metaphor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CT, Classroom Teaching; EE, English Education; IT, Instructional Technologies.

Table 7
Teacher as counselor (student as significant other)

<table>
<thead>
<tr>
<th>Metaphor name</th>
<th>CT f (%)</th>
<th>EE f (%)</th>
<th>IT f (%)</th>
<th>Total f (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent</td>
<td>45 (7.2)</td>
<td>18 (5.5)</td>
<td>4 (2.1)</td>
<td>67 (5.9)</td>
</tr>
<tr>
<td>Friend</td>
<td>4 (0.6)</td>
<td>3 (0.9)</td>
<td>7 (3.6)</td>
<td>14 (1.2)</td>
</tr>
<tr>
<td>Psychologist</td>
<td>3 (0.5)</td>
<td>2 (0.6)</td>
<td></td>
<td>5 (0.4)</td>
</tr>
<tr>
<td>Companion</td>
<td>2 (0.3)</td>
<td>2 (0.6)</td>
<td>1 (0.5)</td>
<td>5 (0.4)</td>
</tr>
<tr>
<td>Total</td>
<td>54 (8.7)</td>
<td>25 (7.7)</td>
<td>12 (6.2)</td>
<td>91 (8)</td>
</tr>
<tr>
<td>Student</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metaphor</td>
<td>4 (6.3)</td>
<td>4 (7.0)</td>
<td>3 (6.7)</td>
<td>4 (6.3)</td>
</tr>
</tbody>
</table>

CT, Classroom Teaching; EE, English Education; IT, Instructional Technologies.
3.2.2. Gender

The $\chi^2$ analysis regarding gender was significant, $\chi^2(5, N = 1,066) = 28.645$, $p = .000$ (see Table 12). Female students generated more transmission-oriented (29.4%), growth-oriented (10.3%), and counseling-oriented (10.6%) metaphors than male students (26.2%, 8.7%, 5.3%, respectively) did. Male students provided more facilitation-oriented (21.6%) and cooperation-oriented (12.3%) metaphors than female students (18.8% and 4.9%, respectively). However, male and female students equally favored the shaping-oriented teaching perspective (26% each). These findings are in accordance with our hypothesis that predicted more growth-oriented metaphors in females than in male students.

3.2.3. Class level

The $\chi^2$ analysis regarding class level was nonsignificant, $\chi^2(15, N = 1,066) = 9.473$, $p = .852$ (see Table 13). This finding suggests that students in the four different class levels conceptualized “teacher” in similar way. Yet, a closer inspection of column percentages in Table 13 reveals that entry level teacher-education students developed more growth-oriented (13.1%) metaphorical images than their exit level peers did (7.8%), and exit level students generated more facilitation-oriented (22%) metaphors than entry level students did (18%). Indeed, a further cross-tabulation of these two conceptual themes with only two class levels (entry and graduating) indicated a significant association at 0.05 level, $\chi^2(1, N = 160) = 4.520$, $p = .034$. This result lends partial support to our hypothesis of class level (entry-exit) differences in prospective teachers’ thinking about teaching and learning. Furthermore, the trend from a growth-oriented conception to a facilitation-oriented one is indicative of a change in favor of student-centered conception of teaching and learning as we had hypothesized.

4. Discussion

In the present study we investigated teacher-education students’ metaphors regarding the concept of teacher. Our findings suggest that while metaphors can act as basic mental models for organizing our knowledge of the world,
some complex and abstract ideas require many different metaphors to represent them fully. For example, teaching can be metaphorically described as transmission of knowledge, but it can also be viewed as shaping students into a prescribed mold or facilitation of student learning and understanding. The wide range of metaphorical images in our study reveals multiple realities of a “teacher” and no single metaphor that can best capture all of the complexities of teaching. An international literature review (e.g., Black & Halliwell, 2000; Chen, 2003; Fenwick, 2000; Hagstrom et al., 2000; Hoban, 2000; Minchew, 2001; Wallace, 2001; Yung, 2001) also reveals numerous metaphors for the teacher, each one based on a different schema. The main reason for this multitude of metaphors is because “... metaphors are selective. They represent a part, but not the whole, of the phenomena they describe” (Weade & Ernst, 1990: 133). So, alternative metaphors may provide fresh lenses through which we become capable of seeing a phenomenon from different theoretical perspectives.

Yet, unlike the six dominant conceptual categories we identified, there were four (i.e., teacher as curer/reparer, as superior authoritative figure, as change agent, and as entertainer) that were not very popular. This means that prospective teachers in this study tended to reject the notions of teaching as curing, controlling, changing/transforming, and entertaining. Rejection of such teaching perspectives is no less important than the identification of favorite ones. Except for the conceptual theme of “teaching as entertaining”, the other three less-favored themes are in some way extensions of the teacher-centered theoretical perspective. This finding could mean that at present many teachers in the Turkish education system tend to spend quite an amount of time and effort to control, cure, or otherwise change their students’ minds and behaviors. It could equally imply that most prospective teachers in this study tended to detach themselves from the controlling, repairing, and/or transforming aspects of teaching. Also, most participants’ rejection of the notion of teaching as entertaining suggests that having fun and joy while learning does not fit at all with these prospective teachers’ professional thinking. Teaching is considered a serious endeavor as it is also the case in other non-Western countries around the world (e.g., Ben-Peretz et al., 2003).

Our findings also suggest that there are major cross-cultural similarities in teachers’ conceptualization of teaching and learning. A comparison of our findings with those of Oxford et al. (1998) and Guerrero and Villamil (2002) reveals many similarities as regards the four major philosophical viewpoints that have shaped educational thought through the centuries. These similarities regard the role of the teacher as an agent for (a) social order (e.g., teacher as manufacturer, mechanic of the mind, sculptor), perceiving the teacher as a social engineer who molds students for the needs of
society; (b) cultural transmission (e.g., teacher as conduit, television set, shopkeeper), viewing the teacher as a gatekeeper who transmits to the students the cultural heritage of the society; (c) learner-centered growth (e.g., teacher as nurturer, scaffolder, counselor), regarding the teacher as a facilitator of personal growth and emotional development; and (d) social reform (e.g., teacher as learning partner, cooperative leader, coach), visualizing the teacher as a social reformer whose main role is to facilitate the creation of an autonomous individual in a democratic community. Therefore, the assumption of possible cultural effects in the conceptualization of teaching in Turkey was not supported by our data.

Various other factors may shape how prospective teachers view teaching and learning. Such factors are gender, one’s experiences with the teachers they have known, knowledge and understanding of teaching theories and practice as well as students’ perceptions of the subjects they are about to teach. With regard to our study both CT and EE students wrote metaphors that fit all the 10 conceptual themes while only eight themes appeared in the IT data; that is, the themes of Teacher as Change Agent and Teacher as Entertainer were not apparent in the metaphors collected from the IT students. Moreover, female participants generated more metaphors related to the themes of Teacher as Nurturer/Cultivator and Teacher as Counselor. This may mean that female students have been exposed to caring and nurturing experiences more than their male peers or that this conception fits best with the female role stereotype.

Of course, our study is not without its limitations. During the third stage of our data analysis process, we dropped a number of metaphors even though some of them could have been placed into a recognizable conceptual theme. The teacher as sharpener metaphor, for instance, argues that similar to sharpeners which sharpen pencils, teachers trim certain behaviors of their students in order to fit them to the society’s expectations. So in retrospect, we may have lost some of the insights inherent in students’ personal ways of conceptualizing teaching.

In conclusion, our findings strongly suggest that teacher educators can use metaphor analysis as a means to assist prospective teachers in examining their values, beliefs, and philosophies about teaching and learning. Metaphors could also serve as a pedagogical tool in teacher education by, for example, opening dialogues on different theories of teaching and learning (see Carlson, 2001; Goldstein, 2005; Wolodko, Willson, & Johnson, 2003). Recently, Gillis and Johnson (2002: 38) convincingly argued that “metaphor can help us understand ‘the selves we want to become or despair of becoming… the selves we have been and the selves we escaped being’… [as well as] the selves we are able to become”. In accomplishing this important goal, metaphor appears to be the most potent cognitive device.

<table>
<thead>
<tr>
<th>Conceptual category for teacher</th>
<th>Male (n = 416) f (%)</th>
<th>Female (n = 650) f (%)</th>
<th>Total (n = 1066) f (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge provider</td>
<td>109 (26.2)</td>
<td>191 (29.4)</td>
<td>300 (28.1)</td>
</tr>
<tr>
<td>Molder/craftsperson</td>
<td>108 (26.0)</td>
<td>169 (26.0)</td>
<td>277 (26.0)</td>
</tr>
<tr>
<td>Facilitator/scaffold</td>
<td>90 (21.6)</td>
<td>122 (18.8)</td>
<td>212 (19.9)</td>
</tr>
<tr>
<td>Nurturer/cultivator</td>
<td>36 (8.7)</td>
<td>67 (10.3)</td>
<td>103 (9.7)</td>
</tr>
<tr>
<td>Counselor</td>
<td>22 (5.3)</td>
<td>69 (10.6)</td>
<td>91 (8.5)</td>
</tr>
<tr>
<td>Cooperative/democratic leader</td>
<td>51 (12.3)</td>
<td>32 (4.9)</td>
<td>83 (7.8)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conceptual category for teacher</th>
<th>Entry level (n = 245) f (%)</th>
<th>2-Year (n = 273) f (%)</th>
<th>3-Year (n = 266) f (%)</th>
<th>Exit level (n = 282) f (%)</th>
<th>Total (n = 1066) f (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge provider</td>
<td>66 (26.9)</td>
<td>82 (30.0)</td>
<td>80 (30.1)</td>
<td>72 (25.5)</td>
<td>300 (28.1)</td>
</tr>
<tr>
<td>Molder/craftsperson</td>
<td>64 (26.1)</td>
<td>73 (26.7)</td>
<td>60 (22.6)</td>
<td>80 (28.4)</td>
<td>277 (26.0)</td>
</tr>
<tr>
<td>Facilitator/scaffold</td>
<td>44 (18.0)</td>
<td>53 (19.4)</td>
<td>53 (19.9)</td>
<td>62 (22.0)</td>
<td>212 (19.9)</td>
</tr>
<tr>
<td>Nurturer/cultivator</td>
<td>32 (13.1)</td>
<td>23 (8.4)</td>
<td>26 (9.8)</td>
<td>22 (7.8)</td>
<td>103 (9.7)</td>
</tr>
<tr>
<td>Counselor</td>
<td>20 (8.2)</td>
<td>22 (8.1)</td>
<td>24 (9.0)</td>
<td>25 (8.9)</td>
<td>91 (8.5)</td>
</tr>
<tr>
<td>Cooperative/democratic leader</td>
<td>19 (7.8)</td>
<td>20 (7.3)</td>
<td>23 (8.6)</td>
<td>21 (7.4)</td>
<td>83 (7.8)</td>
</tr>
</tbody>
</table>
Acknowledgements

We would like to express our sincere gratitude to the two anonymous reviewers and the editors of Learning and Instruction (especially Prof. Dr. Anastasia Efklides) for their valuable contributions to this article.

Appendix. The 64 exemplar metaphors for 10 conceptual categories

Category 1: teacher as knowledge provider (student as passive recipient of knowledge)

- A teacher is like a book because s/he is the main source of knowledge. (CT, 2, F)
- A teacher is like a candle because s/he fights with ignorance like a candle, which fights with darkness. (EE, 4, F)
- A teacher is like a computer because s/he has all the knowledge that is necessary for a student. (IT, 3, M)
- A teacher is like a flower because s/he makes ready knowledge resources (nectar) for the students (bees). (CT, 3, F)
- A teacher is like a public fountain of whose tap leaks slowly for everybody who wants to drink. (CT, 3, M)
- A teacher is like a jug full of water while a student is like an empty glass, which is waiting to be filled with water (knowledge). (CT, 4, M)
- Teachers are like light because they are the biggest enemies of darkness (ignorance). (CT, 3, F)
- A teacher is like a pen, and the students on their first day of school are like notebooks. With time the notebooks change into a poem or a novel. (CT, 2, M)
- A teacher is like rain because rain is a source of life for plants. (EE, 2, F)
- A teacher is like a shopkeeper and a student is like his/her customer because a teacher has various kinds of knowledge to transfer, like a shopkeeper who has various kinds of goods to sell. (CT, 1, M)
- A teacher is like a spring whose water (knowledge) never goes dry. (CT, 2, F)
- A teacher is like the sun because just as the sun lights our world, a teacher also lights his/her students with his/her endless knowledge. (CT, 3, M)
- A teacher is like a television because they both give their viewers information about what happens in the world. (IT, 3, F)
- A teacher is like a tree that provides oxygen or lots of fruits. (EE, 4, M)
- A teacher is like a writer or a poet because, as the writer/poet writes his/her knowledge on pieces of white paper, the teacher inscribes his/her knowledge into the empty brains of the students. (EE, 3, F)

Category 2: teacher as molder/craftsperson (student as raw material)

- A teacher is like an architect because, as the architect builds a construction, the teacher builds on the potential of each student. (EE, 4, M)
- A teacher is like a baker because both of them produce useful things for the society. (EE, 1, M)
- A teacher is like a carpenter because both of them shape something the way they want. (EE, 3, F)
- A teacher is similar to a constructor because s/he builds up the floors in students’ brains. (CT, 1, M)
- A teacher is like a cook. The classroom is his/her kitchen, and the students are his/her ingredients. (CT, 4, F)
- A teacher is like a honeybee because teachers try to bring up good citizens for the society. (CT, 2, F)
- A teacher is like an ironworker because, as the ironworker shapes the raw material, the teacher shapes students through his/her manner, knowledge, etc. (CT, 3, M)
- A teacher is like a jeweler because at the beginning of the school year, a variety of precious stones (students) come to the hands of a jeweler (teacher) and the teacher must give them an attractive shape. (EE, 3, M)
- A teacher is like a mill because the mill grinds the wheat and has a function of making it useful for people. (EE, 4, M)
- A teacher is like a miner because everybody has an ore insight, which is exposed by the teachers. (CT, 3, M)
- A teacher is like a painter because s/he colors the brains of his/her students, who are in front of him/her like an empty canvas. (CT, 3, M)

1 Metaphors in italics indicate titles of the exemplar metaphors; CT = Classroom Teaching; EE = English Education; IT = Instructional Technologies; M = male; F = female; 1 = entry level; 2 = second year; 3 = third year; 4 = exit level.
A teacher is like a **potter**, and a student is like the mud in front of the potter, waiting to be shaped by the potter into all kinds of forms. (CT, 3, M)

A teacher is like a **sculptor** because, they both change pieces of meaningless entities into some masterpieces by shaping them. (EE, 3, M)

A teacher is like a **tailor** because their duties are similar in that they both work for the benefit of the society. (CT, 2, F)

A teacher is like a **technician**, and students are like some raw materials that are ready to be processed in a factory called school. (IT, 4, M)

A teacher is like a **weaver** because s/he weaves his/her students gradually loop by loop like a carpet, giving them any shape or color that s/he wants. (CT, 1, F)

**Category 3: teacher as curer/repairer (student as defective individual)**

A teacher is like a **doctor** because their jobs are similar (diagnosis, cure)... Doctors work to form a physically healthy society while teachers try to form a mentally healthy society. (CT, 3, F)

A teacher is like a **mechanic** who fixes the broken cars. The teacher changes students’ previous bad habits and behaviors. (IT, 2, M)

A teacher is like **medicine**. Just as the medicine treats a patient who has physical problems, the teacher modifies the bad behaviors of his/her students. (CT, 2, M)

**Category 4: teacher as superior authoritative figure (student as absolute compliant)**

A teacher is like the **brain** of our body because nothing can happen without its will. (CT, 3, M)

A teacher is like a **locomotive**. Just as the wagons of a train follow the locomotive by going where the locomotive goes, the students only learn what the teacher teaches. (IT, 4, F)

A teacher is like a **shepherd** because s/he is responsible for his/her students. (CT, 3, M)

A teacher is like a **ship captain** because they both have a destination and are in control of their crews. (EE, 3, M)

**Category 5: teacher as change agent (student as object of change)**

A teacher is like a **fashion designer** and a student is like a fashion model while the classroom is the podium where all the fashion shows take place. (CT, 3, F)

A teacher is like a **scriptwriter**, and the students in the classroom are like actors/actresses... The teacher scripts each lesson in detail. By educating students, s/he also scripts the society’s destiny. (EE, 1, F)

**Category 6: teacher as entertainer (student as conscious observant)**

Teachers are like **actors/actresses** because both of them should always be well-prepared in order not to fail in front of their spectators (students) even if they are not in a good mood. (EE, 2, F)

A teacher is like a **stand-up comedian** whose main duty is to present real life scenes to people while entertaining them. (CT, 4, M)

**Category 7: teacher as counselor (student as significant other)**

A teacher is like a **companion** because s/he works with the students to cross over the hurdles of their lives easily and be happy individuals. (CT, 3, F)

A teacher is like a **psychologist** who always looks at things from the students’ perspectives. (CT, 4, F)

A teacher is like a **friend** who listens to students’ problems. (IT, 1, F)

A teacher is like a **mother** or a **father** of his/her students because they both try to prepare their children for life. (CT, 2, M)

**Category 8: teacher as nurturer/cultivator (student as developing organism)**

A teacher is like a **chameleon**. Just as the chameleon changes its color to adapt to different moods of panic, pleasure or pain, a teacher also adopts multiple roles to meet the needs of different students in the classroom. (CT, 4, F)

A teacher is like a **farmer** because the farmer grows plants and the teacher brings up his/her students. (CT, 1, F)
A teacher is like a garden because s/he deals with different kinds of students like a gardener deals with different kinds of plants. (EE, 3, F)

A teacher is like soil because the soil accepts anything good or bad without any discrimination. (CT, 2, F)

**Category 9: teacher as facilitator/scaffolder (student as constructor of knowledge)**

A teacher is like a bridge built against the flood of ignorance. Without the bridge we can fall into the flood and get lost in it. (CT, 3, F)

A teacher is like a compass because s/he guides the students as a compass guides the captains… Without a compass, the captains cannot know to which harbor to go. (EE, 3, M)

A teacher is like a flashlight because both help people find their ways in dark. (CT, 4, M)

A teacher is like a ladder because they help us to climb where we want in the ladders of life to achieve our personal goals. (EE, 1, M)

A teacher is like a lighthouse because s/he illuminates the darkness of ignorance as the lighthouse illuminates the darkness of the night. (CT, 4, M)

A teacher is like the North Star because it is the most natural and reliable means to show the right way to the ones who get lost. (EE, 4, M)

A teacher is like a road map because being a teacher means being a guide. (EE, 4, M)

A teacher is like a taxi driver because s/he tries to take his/her customers (students) to their destination in a safe and comfortable way. (CT, 3, M)

A teacher is like a torch. Just as a torch provides light to people in dark, the teacher illuminates his/her students’ minds by sharing his/her knowledge and helps them see alternative life paths that they can follow to achieve their personal goals. (CT, 3, F)

Teachers are like traffic signs because they show us which way to follow in order to reach our destinations. (CT, 4, M)

**Category 10: teacher as cooperative/democratic leader (student as active participant in a community of practice)**

A teacher resembles the coach of a football team, and the students are like the football players. (IT, 4, M)

A teacher is like a conductor of an orchestra because s/he arranges the learning environment according to his/her students’ needs and works with them in harmony. (CT, 2, M)

A teacher is like a tour guide because both of them provide guidance to groups (e.g., visitors, students). (EE, 4, M)

**References**


