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EXAMINATION OF TEACHER CANDIDATES' METAPHORS RELATED TO TEACHER EDUCATION PROGRAMS

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ABSTRACT: This study was aimed to determine teacher candidates' metaphors related to teacher education programs. Research sample consisted of 230 seniors, who studied programs in Elementary Science and Technology Education (n=170) and Secondary Mathematics Education (n=60) Departments. The data were collected by means of the teacher candidates' completion of the statement "Teacher education programs are like ... because ...". In this research phenomenological research design was used and data were analyzed by means of content analysis. In the analysis, it was eliminated invalid metaphors and determined categories which are thought to represent metaphors. In the light of the findings, It were shown that teacher candidates produce 162 valid metaphor, and this metaphor collected in five categories in for action, tool/ material, environment, person have a profession, associated with life.

Key words: Teacher education program, teacher candidates, metaphor

INTRODUCTION

Metaphors which are symbolic expressions create different meanings in individuals taking other meanings of words. (Dundar and Karaca, 2013). Metaphor is defined as "the word used in another meaning from the real meaning as a result of an interest or analogies, a word or use of other meaning than the accepted meaning of concept of is" in Turkish Language Institution dictionary (TDK, 2008). Metaphors allow individuals to see a phenomenon as another phenomenon, and is a mental mapping mechanism to understand individuals' world (Karacanta, 2013). Shuell (1990: 102) stressed that "If a picture is worth 1000 words, a metaphor is worth 1000 picture." Because, while a picture provides only a static image, a metaphor provide a mental framework to think about the case. Therefore, using the metaphor we have stated our way of thinking about our understanding o concept or phenomena.

Its relationship of the analogy with metaphor is a known fact. However, metaphors and analogies are not completely overlaps. Both analogies and metaphors establish similes. However, this relationship is realized in different ways. While an analogy clearly compare two areas and show parts of their identify, metaphors highlighting features or associated attributes not changing in two areas, makes comparison implicitly, it not included high similarities or relationship among area (Duit, 1991). Therefore, metaphors have been used as a starting point in many scientific discovery and defined as a part of scientific process, and have been effective on the basis of know towards unknowns in the process of reasoning (Demirci Güler, 2012). In this context, metaphors are seen to be subject to research for determining perceptions towards some concepts in education. Ates and Karatepe (2013-a) analyzed that university students' perceptions towards "environment" concept with the help of methaphors. Ates and Karatepe (2013-b) analyzed university students' perceptions towards "Global Warming" concept with the help of methaphors. Aydin (2010) examined that Owned Metaphors of Secondary Students related to the concept "geography". Akkaya (2011) researched on perceptions of 8th grade elementary students about "speaking" concept. In the literature, it is seen that the identification of metaphors for different concepts such as these. The overall purpose of this study investigation ascribe meaning to the image of individuals and depicted situation in the education field, thanks to metaphors reflect cultural values, attitudes and thoughts of individuals.

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In the nowadays are experienced rapid developments, because the task of rising qualified individuals adapt to the process of change are given to education system, teaching profession has come to the fore. No matter how qualified teachers and thus the quality of trained individuals will increase. Hence, the importance of teacher education programs arises.

The training for prospective teachers adopts the role of a teacher based on teacher education. Carter (2001) stated that metaphors used as a powerful tool in eliciting teacher candidates' opinions on their experiences during their student years and their future thoughts about how they want to become a teacher. However, in the related literature studies examining metaphors for teacher education programs were not detected. Teacher candidates' beliefs about the program can explain the results consisting of experience with the help of metaphor. In this way, metaphors serve as a helpful tool transferring they want to tell.

In this context, the study has been conducted to reveal their metaphors of science and mathematics teacher candidates for teacher education programs. Starting from this idea, sub-problems of the research are as follows:

1. What are metaphors of science and mathematics teacher candidates related to teacher education program?
2. Which are conceptual categories that collected metaphors of science and mathematics teacher candidates related to teacher education program?
3. How are become different conceptual categories related to metaphors according to the department?

METHODS

In this study was used phenomenological research design. Phenomenography is a research method that dealing with people what they perceive phenomena encounter live in the universe and what are their experiences (Cekmez et al., 2012). Different individuals likewise do not understand the phenomenon. To experience or understand a phenomenon varies from person to person (Türkelî Sandir, 2006). Phenomenographic research is try to identify the key parts of this diversity (Trigwell, 2000).

Participants

Research sample consisted of 230 seniors, who studied programs in Elementary Science and Technology Education (n=170) and Secondary Mathematics Education (n=60) Departments.

Data Collection Instruments and Data Analysis

The data were collected by means of the teacher candidates' completion of the statement "Teacher education programs are like ... because ...". Teacher candidates' answers were analyzed by using content analysis.

FINDINGS and DISCUSSION

When metaphors derived from the teacher candidates examined, the following was observed:

- 162 (including 45 from mathematics teacher candidates and 117 from science teacher candidates) has been found to be valid metaphor. 57 of these metaphors such as make a food (6), book(10), passenger bus(2), computer(3), encyclopedia(3), branched tree(2), factory(11), raise trees(2), vaccine(2), kitchen(2), hospital(2), library(2), construction(2), potter's workshop(2), sculptor(4), life(2) are common. The remaining 105 metaphor are represented by one person.
- 37 metaphors such as Rowing on the lake (1), Workout (1), Make to modify a car (1), Produce fabricated violin (1), Very fancy gift package (1), Closed box (1), Made in China products (1), Snowman (1), Cigarette (1), Have put a lot of water into the dough (1), Electrical installations in Schools (1), Blinkers (1), Robot (1), Factory(7), Farm (1), Cafe(2), One type of machine producing factory (1), Bank Note Printing House (1), Rest of the resort (1), Building (1), Guesthouse (1), Maze (1), Penitentiary (1), System that unchanging outcomes(1), Ineffective element (1), Platonic love (1), Anger (1), Chinese torture (1), Empty brain (1) are negative as the content, 15 metaphors such as Family(1), Sculptor(4), Information home(1), Sun(1), Newly planted seedings(1), Vaccine(2), To improve doctor's patients(1),

Flower garden(1), Art workshop(1), Individual development book(1), Fruit trees(1) are positive as the content, and the rest of 110 metaphor was found to be neutral in the sense that the mutual processes.

- The metaphors derived from teacher candidates are categorized in terms of the meanings they contain, consisting of five categories shown in the table.

Table 1. Methaphors and Categories Related to Teacher Education Program

| Science Teacher Candidates | | | | Mathematics Teacher Candidates | | |
|----------------------------------|---|-----|------|---|----|------|
| Category | Mehaphors | f | % | Methaphors | f | % |
| As “an action” | Raise tress(1),Drink Water(1), Make a picture(1),Write articles(1),Read the book(1), To improve doctor's patients(1),Working in the office(1),Educating child(1),Baby's growth(1),Rowing on the lake(1), Make a pottery(1),Make a food (6),Exhausting marathon(1), Workout(1), Racing(1) | 20 | 17,1 | Raise tress(1), Make to modify a car (1), Produce fabricated violin(1), RNA synthesis(1), Raise flower(1), The building is to be constructed(1), Process of tree growth(1) | 7 | 15,6 |
| As a “a tool/ material” | Vaccine(1), Encyclopedia(1),Pyramid(1), Individual development book(1), Rungs of the ladder(1),Book(10), Very fancy gift package(1), Regular running machine(1), Passenger bus(2), Hour(1), Closed box(1), Made in China products(1), Computer(3), A car engine(1), Clothes(1), Bridge(1), Snowman(1) | 29 | 24,8 | Vaccine(1), Encyclopedia(2), Mud, clay(1), Notebook(1), Cigarette(1), Have put a lot of water into the dough(1), Electrical installations in Schools (1), Blinkers(1), TV(1),Robot(1), Macig wand(1), | 12 | 26,7 |
| As “ an environment” | Factory(5), Kitchen(1), Hospital(1), Industry(1),Beehive(1), Hotel(1), One type of machine producing factory(1), Hammam(1), Football Field(1), Building(1), Library(2), Bank Note Printing House(1), Water storage(1), Flower garden(1), Bakery(1), Construction(2), Market(1), Forest(1), Hairdresser(1), Maze(1), Home(1), Guesthouse(1), Space(1), Penitentiary(1), Repository(1), Refectory(1), Workshop(1), The shooting range(1), The foundation of building(1), Recycling center(1), Information home(1) | 37 | 31,6 | Factory(6), Kitchen(1), Hospital(1), Farm(1), Field(1),Cafe(1), Potter's workshop(2), Rest of the resort(1), Art workshop(1), Center of a city(1) | 16 | 35,5 |
| As “ a person have a profession” | Sculptor(3), Cook(1), Worker(1), Tailor(1), Kindergarten teacher(1),Turtle tamer(1) | 8 | 6,8 | Sculptor (1), Pottery master(1) | 2 | 4,4 |
| As “related to life” | Life(2), Family(1), Face with life(1), Law(1), System(1), Preparation for life(1), Platonic love(1), Seasons(1), Human(1), Love(1), Mother(1), Recipe(1), Nervous, Anger(1), Chinese torture(1), Organ(1), Fruit trees(1), Branched tree(2), Sun(1), Empty brain(1), Our fingers(1), Plant(1) | 23 | 19,7 | Exams as SBS, LYS (1), System that unchanging outcomes(1), Computer program(1), Ineffective element(1), Survivor(1), Traffic signs(1), Newly planted seedings(1), Planted seed(1) | 8 | 17,8 |
| Total | | 117 | 100 | | 45 | 100 |

Category 1: Teacher Education Programs as “Action”

In this category, there are 27 metaphors including 20 from pre-service science teachers and 7 from pre-service mathematics teachers. In category, at most, metaphors such as make a food (6) ve raise trees (2) were used. "Raiser trees" metaphor seems to be common at the departments. The following are some examples of metaphors:

"...similar to educating child. When we came to the university we did not have information about teaching as children who do not know the new world. As children grow up and stand on their own feet obtain information about the world, we have learned through the program as a teacher."

"...similar to rowing on the lake. It likes to try getting way in a certain limit. It is certain where you go, but it is limited what you can do. Vain effort labored in vain."

Category 2: Teacher Education Programs as "Tool/ Material"

In this category, there are 41 metaphors including 29 from pre-service science teachers and 12 from pre-service mathematics teachers. In category, at most, metaphors such as book (10), computer (3), encyclopedia (3), vaccine (2), and passenger bus (2) were used. Metaphors such as "encyclopedia, vaccine" seems to be common at the departments. The following are some examples of metaphors:

"...similar to made in China products. These products are imitation of quality products and are suitable. This attractive comes. But after a while, you know it is useless. Teacher education programs are the same. It is a copy of the west. Convenient will be shown with minor changes."

"...similar to passenger bus. Bus is education program. Money is information. Driver is a student. People are teachers."

Category 3: Teacher Education Programs as "Environment"

In this category, there are 53 metaphors including 37 from pre-service science teachers and 16 from pre-service mathematics teachers. This category is concerning maximum metaphors. In category, at most, metaphors such as factory (11), kitchen (2), hospital (2), library (2), construction (2), and potter's workshop (2) were used. It was seen that metaphors such as "factory, kitchen and hospital" common at the departments. The following are some examples of metaphors:

"...similar to factory. Factory undergone various processes by taking the different materials from nature and makes it useful. While training, we will enter this teacher education program."

"...similar to forest. There are many live in the forest. Lack of one of them will derange. Program, so it is the same. If without one of the courses that comprise the requirements for the teaching profession is incomplete or delays."

Category 4: Teacher Education Programs as "Person Have a Profession"

In this category, there are 10 metaphors including 8 from pre-service science teachers and 2 from pre-service mathematics teachers. This category is concerning minimum metaphors. In category, at most, metaphor sculptor (4) was used. The following are some examples of metaphors:

"...similar to sculptor. Program the same as a sculptor, gives us the shape. -Shape of teacher-"

"...similar to cook. There are a lot of ingredients in the kitchen at the restaurant. Cook chooses from these materials that are needed and does dishes. Teacher education program required for teaching in the selects and presents us."

Category 5: Teacher Education Programs as "Related to Life"

In this category, there are 31 metaphors including 23 from pre-service science teachers and 8 from pre-service mathematics teachers. In category, at most, metaphors such as life (2), branched trees (2) were used. Common metaphor which is used by teacher candidates doesn't have. The following are some examples of metaphors:

"...similar to platonic love. You do not get the teacher education program needed for teaching. We came as high expectations, but the program can not response to me was for teaching."

“...similar to Chinese torture. Teacher education programs involves taking force things that are not relevant in teaching. We are trying very hard to 5-minute presentations. But even worse is that they will not do any of my teachers in my life.

CONCLUSION

Considering the responses of teacher candidates, especially metaphors and examples of common answers, the positive and negative aspects of the program are emerging. If teacher how perceive teacher education program applied as become to teacher, they will create a profile in the minds of teacher in that direction. Therefore, in the light of the findings for the thoughts and perceptions of teacher candidates about the results of the program can be summarized as follows:

1. It was seen that both science teacher and mathematics teacher candidates thought teacher education programs as “an environment” at most. Metaphor most frequently used under environment category is the factory.
2. It was seen that both science teacher and mathematics teacher candidates thought teacher education programs as “person have a profession” at least.
3. Metaphors such as raise trees, encyclopedia, vaccine, factory, kitchen, hospital, and sculptor are common in both departments.
4. Although 37 metaphors are negative as content, 15 metaphors are positive and 110 metaphors are neutral. Thus, it can be said that teacher candidates’ opinions will change with mutual relations. Because, in the 110 methaphor which are neutral, when installing analogy relations, bilateral relations arising from the positive and negative sides have been talking about. If teachers offer students good research results, will form a good product or vice versa.

RECOMMENDATIONS

At the end of the study, the following suggestions may be submitted:

1. Metaphors for teacher training programs are examined deeply as the common metaphors can be examined by applying teacher candidates in the different departments.
2. Examining the perceptions of prospective teachers towards the program, may be provided the revision of teacher education programs.

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