

University Lectures' Multiple Intelligences and Universities' Effectiveness in East Azerbaijan's Public and Private Universities

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Abstract

The aim of this paper is to investigate the relationship between University lectures' multiple intelligences with Universities' Effectiveness of East Azerbaijan's Public and Private Universities. Multiple intelligences are defined on Howard Gardner's theory and the Universities' Effectiveness on Stephen P. Robins' 30 criteria in Universities' Effectiveness. One main and six subsidiary hypotheses are regulated. Statistical population is 186 East Azerbaijan's university lectures of East Azerbaijan. Data gathering instruments are 2 questionnaires of multiple intelligence and Effectiveness questionnaires which are regulated on the basis of Howard Gardner's theory and Stephen P. Robins' 30 criteria and they are distributed among population after reliability and validity testing. Deductive and descriptive methods are used in order to analyze the gathered data via questionnaires. Descriptive statistical method is used for classification, summarization and analyses of data and regression test is used in deduction level for testing hypothesis of 1, 1.1, 1.2, 1.3, 1.4, 1.5, and 1.6 and the final results show that University lectures' multiple intelligence is related to the Universities' Effectiveness of East Azerbaijan.

Keyword

Multiple Intelligence, Universities' Effectiveness, Lingual Intelligence, Spatial Intelligence, Logical Intelligence, Interpersonal Intelligence, Intrapersonal Intelligence

Multiple Intelligences Theory

Daniel Golman introduced the concept of Emotional Intelligence (EI). He claimed that efficient mental or cognitive processing is necessary for controlling even a handful of core emotions—anger, fear, enjoyment, love, disgust, and others. More to the point, Golman compared the rational mind with the emotional mind. In comparing the rational mind with the emotional mind, Golman argued that the emotional mind is far quicker and acts without even pausing to consider what it is doing. He stated that the quickness of emotional mind prevents a deliberate, analytic reflection that is the sign of the thinking mind.

Gardner's MI theory posits that human beings possess at least eight intelligences, to a greater or lesser extent. They are as follow (Armstrong, 2009, pp.6-7):

Once this broader and more pragmatic perspective was taken, the concept of intelligence began to lose its mystique and became a functional concept that could be seen working in people's lives in a variety of ways. Gardner provided a means of mapping the broad range of abilities that humans possess by grouping their capabilities into the following eight comprehensive categories or "intelligences":

Linguistic: The capacity to use words effectively, whether orally (e.g., as a storyteller, orator, or politician) or in writing (e.g., as a poet, playwright, editor, or journalist). This intelligence includes the ability to manipulate the syntax or structure of language, the phonology or sounds of language, the semantics or meanings of language, and the pragmatic dimensions or practical uses of language. Some of these uses include rhetoric (using language to convince others to take a specific course of action), mnemonics (using language to remember information), explanation (using language to inform), and meta-language (using language to talk about itself).

Logical-mathematical: The capacity to use numbers effectively

(e.g., as a mathematician, tax accountant, or statistician) and to reason well (e.g., as a scientist, computer programmer, or logician). This intelligence includes sensitivity to logical patterns and relationships, statements and propositions (if-then, cause-effect), functions, and other related abstractions. The kinds of processes used in the service of logical-mathematical intelligence include categorization, classification, inference, generalization, calculation, and hypothesis testing.

Spatial: The ability to perceive the visual-spatial world accurately (e.g., as a hunter, scout, or guide) and to perform transformations upon those perceptions (e.g., as an interior decorator, architect, artist, or inventor). This intelligence involves sensitivity to color, line, shape, form, space, and the relationships that exist between these elements. It includes the capacity to visualize, to graphically represent visual or spatial ideas, and to orient oneself appropriately in a spatial matrix.

Bodily-kinesthetic: Expertise in using one's whole body to express ideas and feelings (e.g., as an actor, a mime, an athlete, or a dancer) and facility in using one's hands to produce or transform things (e.g., as a craftsperson, sculptor, mechanic, or surgeon). This intelligence includes specific physical skills such as coordination, balance, dexterity, strength, flexibility, and speed.

Musical: The capacity to perceive (e.g., as a music aficionado), discriminate (e.g., as a music critic), transform (e.g., as a composer), and express (e.g., as a performer) musical forms. This intelligence includes sensitivity to the rhythm, pitch or melody, and timbre or tone color of a musical piece. One can have a figural or "top-down" understanding of music (global, intuitive), a formal or "bottom-up" understanding (analytic, technical), or both.

Interpersonal: The ability to perceive and make distinctions in the moods, intentions, motivations, and feelings of other people. This can include sensitivity to facial expressions, voice, and gestures; the capacity for discriminating among many different kinds of

interpersonal cues; and the ability to respond effectively to those cues in some pragmatic way (e.g., to influence a group of people to follow a certain line of action).

Intrapersonal: Self-knowledge and the ability to act adaptively on the basis of that knowledge. This intelligence includes having an accurate picture of oneself (one's strengths and limitations); awareness of inner moods, intentions, motivations, temperaments, and desires; and the capacity for self-discipline, self-understanding, and self-esteem.

Naturalist: Expertise in the recognition and classification of the numerous species—the flora and fauna—of an individual's environment. This also includes sensitivity to other natural phenomena (e.g., cloud formations, mountains, etc.) and, in the case of those growing up in an urban environment, the capacity to discriminate among inanimate objects such as cars, sneakers, and CD covers.

The theoretical framework of the present study is based on Gardner's MI theory. This theory has a positive and expansive view towards intelligence (Campbell, 2000).

Effectiveness

Peter Drucker (1990) observed that the nonprofit institution in America is in many ways a "growth industry." Accompanying this expansion has been a growing body of literature prescribing methods for increasing the effectiveness of nonprofit organizations, their university lectures, and their boards. But research on these matters remains sparse (Penn, 1991; Powell, 1987; Green & Griesingev, 1996).

According to Drucker (1974, p. 43, "Efficiency is concerned with doing things right. Effectiveness is doing the right things." Whereas this definition of effectiveness is often cited, there is a lack of consensus about how to operationalize the concept (for example, Anspach, 1991; Cameron and Whetten, 1983; Cook and Brown, 1990; Hall, 1991; Herman, 1990; Kanter and Brinkerhoff, 1981; Kraft, 1991; Quinn and Rohrbaugh, 1983; Seashore, 1983; Seashore and Yuchtman, 1967; Spray, 1976; Steers, 1977). If effectiveness is doing the right things, then who determines what is right, what constitutes the right things, and how they are to be measured? The literature on Universities' effectiveness contains a variety of competing perspectives. Indeed, the very concept of effectiveness has been challenged on the grounds that multiple constituencies often cannot agree on the factors or weights underlying such evaluative judgments (Green & Griesingev, 1996).

Debates about which definition is best continue in the literature (Molnar and Rogers, 1976; Price, 1972), and some writers have become so discouraged with the ambiguity of the concept of Universities' effectiveness that they suggest dropping it from the academic vernacular altogether (Goodman, 1979; Hannan and Freeman, 1977; D. Baugher 1981).

Research Hypothesis

1. There is a relationship between University lectures' Multiple intelligences and Universities' Effectiveness in East Azerbaijan's Public and Private Universities.
- 1.1. There is a relationship between University lectures' Linguistic Intelligence and Universities' Effectiveness in East Azerbaijan's Public and Private Universities.
- 1.2. There is a relationship between University lectures' Logical-Mathematical intelligences and Universities' Effectiveness in East Azerbaijan's Public and Private Universities.

- 1.3. There is a relationship between University lectures' Spatial intelligences and Universities' Effectiveness in East Azerbaijan's Public and Private Universities.
- 1.4. There is a relationship between University lectures' Kinesthetic intelligences and Universities' Effectiveness in East Azerbaijan's Public and Private Universities.
- 1.5. There is a relationship between University lectures' Interpersonal intelligences and Universities' Effectiveness in East Azerbaijan's Public and Private Universities.
- 1.6. There is a relationship between University lectures' Intrapersonal intelligences and Universities' Effectiveness in East Azerbaijan's Public and Private Universities.

Research Method

The present research method is survey. Data in survey method is gathered from among a wide range of cases. In this method, the characteristics of individuals are not considerable but abstractive results are considered totally and then they are studied. On the other hand, the results of research are used in decision making, policies and planning in applied research.

Statistical Population and Samples

The population of present study is the East Azerbaijan's university lectures and have been selected 186 university lectures among them.

Tools of Data Gathering

Demanded questionnaires are prepared according to research variables and their method of performance.

Research questionnaires are composed of two kinds of questions. The first part is coded by alphabets and in order to clarify the gender, age, marital status, job background and educational level. The second part is composed of 80 questions for theories testing:

- Questions 1-10: Linguistics intelligence testing in the form of 10 indices regulated according to performing model of research
- Questions 11-20: Logical-Mathematical intelligence testing in the form of 10 indices regulated according to performing model of research
- Questions 21-30: Spatial intelligence testing in the form of 10 indices regulated according to performing model of research
- Questions 31-40: Kinesthetic intelligence testing in the form of 10 indices regulated according to performing model of research
- Questions 41-50: Interpersonal intelligence testing in the form of 10 indices regulated according to performing model of research
- Questions 51-60: Intrapersonal intelligence testing in the form of 10 indices regulated according to performing model of research
- Questions 61-80: Universities' Effectiveness testing in the form of 20 indices regulated according to performing model of research. The used index in questionnaire questions of Universities' intelligence starts from some times and ends in I don't know and they are from very few to very much in Universities' Effectiveness questions.

Reliability and validity of the Questionnaire

Symbolic and formal reliability are used in this study. Drafts of

questionnaire were given to some professors, experts and East Azerbaijan's university lectures in order to evaluate the reliability and suitability of the questions. Then, their ideas will be imposed on questionnaires and necessary changes will be made finally. The analysis tables (1-2-3-4) show that both have satisfied reliability and validity.

Table 1: Reliability Testing Result for Multiple Intelligences

| Alternatives | Profusion | Percentages |
|----------------|-----------|-------------|
| Numbers | 80 | 100 |
| Not calculated | 0 | 0.000 |
| Total | 80 | 100 |

Table 2: Reliability Testing Result for Multiple Intelligences

| Cronbach's Alpha | Number of items |
|------------------|-----------------|
| 0.726 | 90 |

Table3: Reliability Testing Result for Universities' Effectiveness

| Alternatives | Profusion | Percentages |
|----------------|-----------|-------------|
| Numbers | 80 | 100 |
| Not calculated | 0 | 0.000 |
| Total | 80 | 100 |

Table 4: Reliability Testing Result for Universities' Effectiveness

| Cronbach's Alpha | Number of items |
|------------------|-----------------|
| 0.775 | 20 |

The Method of Statistical Data Analysis

Descriptive and deductive statistical methods are used in order to analyze data of gathered questionnaires. Frequency distribution and related responses percentage are used for describing responses. Bar graphs represent some of statistical data and regression test is used for deductive ones.

Deductive Analysis of Statistical Data

H_1 : There is a relationship between University lectures' Multiple intelligences and Universities' Effectiveness in East Azerbaijan's Public and Private Universities.

H_0 : There is not a relationship between University lectures' Multiple intelligences and Universities' Effectiveness in East Azerbaijan's Public and Private Universities.

After getting the questionnaires and analyzing wit SPSS 11 we have had the information as they have summarized in one table (table 5).

Table 5: Parameter indices related to regression model

| Variable | Standardized coefficients. slope Line (β) | Calculated T | The significance level |
|--------------------------|---|--------------|------------------------|
| Multiple Intelligences | 0.625 | 7.445 | 0.000 |
| Linguistics intelligence | 0.598 | 3.235 | 0.000 |

| | | | |
|----------------------------|-------|-------|-------|
| Mathematical intelligence | 0.447 | 6.225 | 0.000 |
| Spatial intelligence | 0.486 | 4.982 | 0.000 |
| Kinesthetic intelligence | 0.625 | 6.450 | 0.000 |
| Interpersonal intelligence | 0.697 | 3.965 | 0.000 |
| Intrapersonal intelligence | 0.654 | 6.555 | 0.000 |

It can be said that mentioned test in the error 0.05 or confidence level of 95% as table (5) shows in the significant level of test which is 0.000. According to β level it can be said that one unit of multiple intelligence increase leads to X% increase (X; mentioned as slop line) in Universities' effectiveness. Therefore, it can be concluded that the regression model of this test is statistically significant and the supposition of H_1 is accepted but the supposition of H_0 is rejected. So, University lectures' multiple intelligence is related to the Universities' Effectiveness in East Azerbaijan.

Conclusion

The results of this study and testing hypothesis show the following results:

Hypothesis1: This hypothesis is evaluated by 80 questions (60 questions of multiple intelligences and 20 questions of Universities' effectiveness). The results show that significant amount is smaller than the significant minimum level. Therefore, University lectures' multiple intelligence is related to the Universities' Effectiveness in East Azerbaijan.

Hypothesis1.1: This hypothesis is evaluated by 30 composited questions (10 questions of lingual intelligence and 20 questions of Universities' effectiveness). The results show that significant amount is smaller than the significant minimum level. Therefore, University lectures' lingual intelligence is related to the Universities' Effectiveness in East Azerbaijan.

Hypothesis1.2: This hypothesis is evaluated by 30 composited questions (10 questions of logical-mathematical intelligence and 20 questions of Universities' effectiveness). The results show that significant amount is smaller than the significant minimum level. Therefore, University lectures' logical-mathematical intelligence is related to the Universities' Effectiveness in East Azerbaijan.

Hypothesis1.3: This hypothesis is evaluated by 30 composited questions (10 questions of spatial intelligence and 20 questions of Universities' effectiveness). The results show that significant amount is smaller than the significant minimum level. Therefore, University lectures' spatial intelligence is related to the Universities' Effectiveness in East Azerbaijan.

Hypothesis1.4: This hypothesis is evaluated by 30 composited questions (10 questions of locomotive intelligence and 20 questions of Universities' effectiveness). The results show that significant amount is smaller than the significant minimum level. Therefore, University lectures' kinesthetic intelligence is related to the Universities' Effectiveness in East Azerbaijan.

Hypothesis1.5: This hypothesis is evaluated by 30 composited

questions (10 questions of interpersonal intelligence and 20 questions of Universities' effectiveness). The results show that significant amount is smaller than the significant minimum level. Therefore, University lectures' interpersonal intelligence is related to the Universities' Effectiveness in East Azerbaijan.

Hypothesis 1.6: This hypothesis is evaluated by 30 composited questions (10 questions of intrapersonal intelligence and 20 questions of Universities' effectiveness). The results show that significant amount is smaller than the significant minimum level. Therefore, University lectures' intrapersonal intelligence is related to the Universities' Effectiveness in East Azerbaijan.

Implications and applications

Research results show that University lectures' multiple intelligence is related to Universities' Effectiveness in East Azerbaijan and the more the University lectures' intelligence is, the more the Universities' Effectiveness will be. Therefore, multiple intelligences of university lectures should be improved. Following strategies are proposed in order to Universities' development and University lectures' intelligence improvement:

For Lingual Intelligence Improvement

- Writing activities and its exercises
- Practicing vocational key words
- Planning to have discussion with other university lectures
- Reviewing and studying other University lectures' speeches

For Logical-Mathematical Intelligence Improvement:

- Practicing logical problems' solving for Gas Company by university lectures
- Classification of data
- Coding problems

For Spatial Intelligence Improvement:

- Utilizing photography skills
- Utilizing slides and movies
- Visual riddles

For kinesthetic Intelligence Improvement:

- Group competition games
- Physical intelligence practicing
- Various applicable activities

For Interpersonal Intelligence Improvement:

- Interpersonal communications
- Intercession in involvements
- Educating others
- Paper games

For Intrapersonal Intelligence Improvement:

- Studying on oneself in un-crowded places
- One-minute reaction periods
- Interest focuses
- Communicating others

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