INFLUENCE OF A DISTANCE LEARNING ENVIRONMENT ON UNIVERSITY STUDENTS' ATTRIBUTION OF SUCCESS AND FAILURE FACTORS

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Abstract

One of the distance learning means through the Internet is that of a student community which is based on three integrated components: A virtual community (the social dimension), which is a guest in a virtual environment (the technological dimension) and realizes pedagogic contents (the educational dimension)[18]. In this type of learning the learner is perceived as an independent, active learner with freedom of choice.

In the traditional classroom a direct relation exists between the teacher and the learner, whereas in distance learning there is a mediating factor between the learners among themselves and between the teacher and the learners {14-17}. Thus, virtual learning causes confusion and embarrassment among the students[12], which increases the sense of frustration. The effect of psychological aspects on the success of learning via the distance learning method must therefore be examined.

This study is based on Weiner's[25] attribution theory, which states that the reasons people attribute to their own and others' behaviors, and especially their successes and failures, influence their motivation. The aim of this study is to examine the influence of a distance learning environment on students' attribution of success or failure factors and to examine factors in the distance learning system that influence students' attribution to success or failure in a community management course. It examines factors that influence the students' learning in the course as well as the relations system between the variable learning environment and the variable attribution of factors for success or failure to this teaching method.

A significant relation was found between the distance learning environment and the attribution of failure to external factors, especially the nature of the task. The conclusion was reached that in the virtual community management course students tend to attribute their success or failure to internal factors, especially effort. However, when the student's achievements are not good, he/she projects the reason for the low achievements to external factors, especially the teacher, the teaching method and the learning method.

Keywords: Distance Learning; success and failure; failure factors; internal and external reasons; Weiner's theory.

Internet-based teaching and learning

The availability of the Internet everywhere – in higher education, in the schools, at work, and even in the homes – led at the end of the 1980's and the beginning of the 1990's to rapid changes in the social and political patterns between people and institutions[20].

A research carried out in high schools found that the main consideration of students who chose to take on-line courses was the extent of their control over time i.e., the flexible conditions of the course. The disadvantage of learning on the Internet is that there is no sense of personal touch. The students must also invest much more time in a distance learning course, thus studying in a virtual course requires student self-discipline.

Several factors explain the lack of motivation in on-line courses that may explain the differences in the students' attribution of success or failure.

1. The student does not feel obligated to cope with the material transmitted to him on the Internet, especially when required to participate in a discussion group where there is clear responsibility in the group.
2. The level of the lecturer's involvement in the course. Studies on the role of the teacher in the virtual environment indicate that the form of the questions and the feedback given by the instructor during a computerized course influence the students to complete the learning tasks[15-17]. Questions from the teacher or the students that remain unanswered cause the student to log off from the system or not react to the given tasks.
3. The students exhibit difficulties in teamwork and in interaction with their peers via the Internet.

In the education and distance learning literature, the student-centered learning environment is mentioned as the classic, most appropriate environment for activating learners in a technology-rich and distance learning environment[24;9].

The research performed by Rafaeli and Sudweeks[19] on content analysis of messages from discussion groups, found that a discussion group is an instrument that enables high level interaction and cooperation between learners who are physically remote from each other. According to Harasim[6], interaction between a group of people with a common interest encourages and enables collaborative learning that improves the learning quality. Such learning enables not only active learning, but also interactive learning that occurs through the group social process[8] and leads, among other things, to social crystallization of the learning community[19]. As the number of references to previous messages increases (and not only to the last message), the interactivity of communication also increases[7;19].

Dialogue on the Internet enables the learners to choose the time and mode of participation and to present claims in an open and democratic manner. Tredway[23] presents dialogue as a conversation on moral concepts and dilemmas through working on a particular text and analyzing it: Expressing ideas, asking questions and expressing doubts that lead to understanding and learning a different "truth" or alternative knowledge. The dialogue helps build self-esteem and a sense of the ability to independently structurate meanings, form ideas by thinking and achieve validity from others.

Hara, Bonk and Angeli[5] found that most students limit their participation to the course requirements, since participation and perseverance obligate responsibility and self-discipline regarding the learning. Another disadvantage refers to students with low linguistic skills who may be in an inferior position because this instrument is directed only for presenting textual data. The absence of visual communication – non-verbal gestures, smiles, tone of voice, eye contact, etc., forces the users to make certain assumptions regarding their audience. The users cannot know who will respond to their messages and who will not.

Rovai[21] analyzed the components of the sense of community:

• Ratio between the instructor and the number of learners. As the number of learners

compared to one teacher increases, the personal attention components decrease. As the number of learners increase the feelings of attention and positive attitudes towards the course and the learners' achievements decrease.

- Psychological and communicational interval between the learners and the instructors. This interval varies from person to person, and depends on two variables: Structure and dialogue. As the teacher's use of the structural element increases, the psychological gap increases. As the use of the dialogue element increases, the sense psychological alienation decreases and the sense of belonging to a community increases.
- Social presence and availability of the instructor. Social presence is essential. The students should not get the feeling that nobody reads what they write, and the teacher must respond with gestures or with a full feedback to each of the students' appeals.
- The "stealthy" – those found in the computerized community gain knowledge from the texts and letters in the forums and in general but do not contribute at all. Their existence prevents normal evolution of the course and contributes to an atmosphere of distrust among the actively participating.
- Social equality. Absence of voice and picture prevents prejudices and enables equal and fair attitudes of the students towards each other. This enables more fertile discussions when there is egalitarian attitude, all opinions are legitimate, and as a result cooperation increases.
- Cooperative learning. Significant dealing of the learners and their participation in projects, in fulfilling tasks and in discussions proves that they enable good and successful learning. This is therefore a good model for a computerized environment. This type of learning strengthens social relations and contributes to an atmosphere of mutual support.

Other research[22] analyzes four components of the community: Spirit, practice, interaction and learning. It is not the medium itself that influences interactivity but rather the way in which the sense of being a community is built and maintained.

- Spirit: The social atmosphere, the devoted relation, the cohesion, the pleasure of being together. In its absence it is harder to persevere, it supplies security and motivation.
- Practice: Practice enables the group to believe in its ability as a group. It affords the group credit and a sense of charity that enhances motivation and giving.
- Interaction: The interaction enables friendship, listening and understanding. It enables the learners to deal in the learning contents thanks to the social contents. The instructor must encourage interaction and supply a sense of security.
- Learning: The learning process which is beyond the transmission of knowledge but rather a process that occurs also from the actual participation, which is also a type of information processing.

Weiner's model for understanding achievement-oriented behavior

The main assumption in this model, as presented by Weiner[26], is that the causal attribution of a person, i.e., his/her perception of the factors for success or failure in an achievement role, explains a large part of achievement-oriented behavior. Reasons and parameters: Four reasons to which people attribute success or failure in an achievement role are presented in the original formulation of the attribution model as presented by Weiner et al[25] - Ability, effort, nature of the task, luck. Learning ability (talents) means that a person is capable in terms of his/her learning abilities to learn and has the power and the possibility. Learning effort means adopting use of the brain for understanding the learned material – effort

in terms of time and investment. <u>Nature of the task</u> means the learning environment (teacher, learners and learning material). <u>Luck</u> means fate, destiny over which man has no control.

These reasons can therefore be classified as:

- Ability and effort are internal reasons stemming from the people themselves.
- Nature of the task and luck are external reasons since their source is external.

The attribution model explains these four parameters according to their stability, i.e., stable (fixed) reasons and unstable (temporary) reasons. Ability and nature of the task are fixed reasons that do not change (stable reasons), whereas luck and effort are temporary and changing reasons (unstable reasons). Weiner[27] later added another parameter, <u>control</u>, i.e., the control a person has over the reason for his/her success or failure. Weiner differentiated between a controlled factor and an uncontrolled factor. For example, a person controls the amount of effort he/she invests but usually does not control his/her mood or ability. A person controls help received from others to a certain extent but does not control luck. The uncontrolled reasons are therefore those that a person cannot control (ability and luck) whereas the controlled reasons are those which a person can control (effort and nature of the task). This perception of reasons and dimensions stemmed, according to Weiner[28], from Heider's model and from the researchers' intuition.

In conclusion, Weiner's theory classifies reasons for success and failure according to three dimensions:

- Locus (external versus internal)
- Extent of stability (fixed versus temporary)
- Control (controlled versus uncontrolled)

Locus of reasons and the Attribution theory

Some people tend to attribute their successes and failures to an internal reason – "I am responsible for my successes and failures". These people are characterized by what is called an "internal locus of control". They believe that everything that happens to them is the result of their actions. They feel greater control over reality and therefore have greater motivation to do things. Other people tend to attribute their successes and failures to an external reason – "It is not I who is responsible for what happens to me, but others/luck/the weather". These people are characterized by what is called an "external locus of control". They believe that everything that happens to them does not depend on their actions but rather on factors that are external to them. They feel lack of control and therefore have low motivation to do things. According to this theory, the attribution determines the emotional response to success or failure as well as intentions and behaviors in the future. This is true both when considering the success or failure of the attributing person himself and when considering the success or failure of another person. Attribution will thus determine whether we feel pride, thankfulness or relief following success, and whether we will feel anger, hope or despair following failure. Attribution determines whether we will try to perform the task again, and if so, how we will prepare for this[4].

These causal attributions influence the continued behavior and motivation of people [10;26]. A person who attributes success to a fixed internal factor, such as personal ability, will expect success in the future and will continue dealing in the field in which he succeeded. On the other hand, a person who attributes failure to a fixed internal factor of inability may fear unavoidable failure. As a

result of this fear a decrease in this person's level of achievement and motivation is to be expected. Attribution of failure to unstable and internal reasons such as lack of effort leads to higher expectations in the future than attribution of failure to stable reasons. A person's attributions influence his/her success, sense of well-being and personal, educational and professional satisfaction from life. The theory of attribution holds a potential to help us understand how the meaning a person affords to his/her behavior can influence the extent of his/her motivation and the sense of satisfaction from his/her achievements[2].

Differences were found in the attribution of reasons for success and failure among people with a different achievement motive (high or low). People with a high achievement motive attribute internal reasons such as ability and effort to their successes and external reasons such as the difficulty of the task and bad luck to their failures. In contradistinction, people with a low achievement motive attribute external reasons (such as luck, easy task) to their successes and internal reasons (such as lack of effort and inability) to their failures[11; 13]. A positive relation was found between an internal locus of control and learning achievements, i.e., people with an internal locus of control have higher chances of gaining higher learning achievements. Possible explanations for this include:

A. People with an internal locus of control believe that their behavior influences success or failure and will therefore exhibit greater effort and initiative in performing tasks and will persevere even in the face of failure. There is a chance that their achievements will improve. However, people with an external locus of control believe that their success or failure depends on the wishes of others or other circumstances and will make less of an effort, and their chances of improving their achievements are therefore lower.

B. People with an internal locus of control sense that they can control their environment. They will therefore direct their thoughts and efforts to absorbing, remembering and understanding relevant information that contributes to successful performance of learning tasks. For example, a student with an external locus of control will think that the teacher is the reason for the failure, that with another teacher he/she will have better chances, and therefore he/she does not have to make a greater effort to learn and prepare for the test. In contradistinction, the student with an internal locus of control will tell himself/herself that he/she must learn more in order to succeed in the next test.

The difference in the behavior of people with a high need for achievement and those with a low need for achievement stems from their different perception of the reasons for their success or failure. Those with a high need for achievement tend to attribute success to internal reasons (especially learning, effort) whereas those with a low need for achievement tend to attribute failure especially to inability. The belief in effort is considered an internal reason that can be changed, enables a person to assume that the results depend on his/her effort, and is more characteristic of those with a high need for achievement.

There exist differences in students' attribution of failure and success. When students are asked to explain success or failure, they mention effort and ability as leading to success, whereas failure is usually explained in the nature of the task and mood. The majority of students of all ages indicate effort and mood (internal and not fixed factors) as reasons for the results. Students also tend to mention more internal than external factors and more non-fixed than fixed reasons. The influence of the attribution of factors for success and failure by students was examined by examining the structure of learning mathematics in school, comparing two populations according to gender (boys versus

girls) and examining factors influencing the girls to improve their mathematics skills. Use of a learning strategy that included meta-cognitive learning changed the girls' attribution of success in mathematics, i.e., when the learning environment changed the girls attributed more internal factors to success and failure in mathematics (Kramarski, 2002).

Numerous studies have shown that learners in distance learning do not have one profile but rather change widely under influence of the system [3].

The Research Method

This study was performed on thirty students studying for their bachelor's degree who took the course "virtual community management". All subjects answered two questionnaires, and 21 of the subjects were interviewed (9 face-to-face [43%] and 12 by telephone [57%]).

Two data-collection methods were chosen. A questionnaire was given at the beginning and at the end of the course, the students were interviewed, and intermediate summaries were obtained from the students. It was assumed that these methods would afford a multi-dimensional picture of the researched subject and would reinforce the validity of the findings. Observation of the students during the course was also performed.

The questionnaire examined the reasons to which the students attributed their successes and failures in studies. The questionnaire contained two parameters of internal attribution (ability and effort) and two of external attribution (nature of the task and luck). Each parameter is composed of six items. The questionnaire included 24 closed questions on a 1-5 scale, where 1 – do not agree, 2 – agree to a small extent, 3 – agree to an intermediate extent, 4 – agree, 5 – agree to a great extent.

Alpha Cronbach internal consistence reliability coefficients, as reported in the field research, were: A. Ability – 0.81; B. Effort – 0.90; C. Nature of the task – 0.86; D. Luck – 0.95; for the entire questionnaire – 0.92 (Arguati, 2000).

Individual in-depth interviews constructed according to variables and content worlds of topics related to the research and the course were also used to collect data. A guided and focused interview usually takes place according to subjects related to the research goals. The disadvantages of this type of interview are related to problems of validity and reliability, due to different responses (Ben Yehushua, 1990). Open questions enable subjects to answer freely and express broad opinions and perceptions regarding the course. Some interviews were held "face-to-face" and some by telephone (9 face-to-face [43%] and 12 by telephone [57%]). All interviews were taped and the responses recorded and documented in the data-recording sheet.

The questions dealt in two knowledge bases:

1. Questions dealing in the research variables: Frontal/distance learning environment, attribution of success and failure – internal factors (ability and effort) versus external factors (nature of the task and luck).
2. Questions pertaining to the course itself. These questions were intended for examining possible factors and influences on the research variables as a result of the learning method, such as: Participation of the students in the course and the interaction among them, the attribution of the students to the contents of the course, and the extent of the lecturer's involvement in the course.

Analysis of the interview

After defining the categories and content scales, all data were collected (content analysis). This process was performed while maintaining the authenticity of the interview and quoting the subjects in their own language.

During their studies the students were asked to send an intermediate concise summary to the forum managed by the lecturer and to refer to insights, feelings, attitudes towards the contents of the course and management of the community on the net. The intermediate summaries were used in the content analysis as additional information that verifies the data collected by the questionnaires and interviews. The course was intended to enable each student to learn and experience in the world of virtual communities. The students were requested to choose a topic, and as a group to manage a forum on this topic. They had to join one of the other forums. Thus, they had to independently learn both the required contents and the processes undergone by any virtual community whose members communicate in a digital network (from the time of its establishment, the guiding process and its possible demise).

The lecturer's role was to guide the students and add contents, explain and direct the community in its evolution processes and in the achievement of its aims.

Results

The means of the total tendency of the students to attribute success to internal reasons (mean of the tendency to attribute success to ability and effort) and to external reasons (mean of the tendency to attribute success to the nature of the task and to luck) were calculated. The means of the total tendency of the students to attribute failure to internal and to external reasons were also calculated. The means of the students' tendencies to attribute their failure/success to internal/ external factors before and after exposure to a distance learning environment are presented in Table 1. The values of the means of the parameters for attributing internal reasons to success and failure indicate a decrease in the attribution of the students to internal factors for

failure (mean before = 3.06, mean after = 2.52) and success (mean before = 3.56, mean after = 2.99). Thus, after exposure to a distance learning environment a decrease occurred in the attribution of the students to internal factors both regarding success and regarding failure. However, this research cannot determine the statistical significance of these differences.

The values of the means of parameters for attributing external reasons for success and failure do not indicate significant changes in the attribution of the students to external factors for failure (mean before = 2.47, mean after = 2.51) and success (mean before = 2.69, mean after = 2.71).

Table 1: Students' tendency to attribute failure/success to internal/external factors before and after exposure to a distance learning environment (means and standard deviations).

Type	Nature	Exposure to distance learning environment	Mean	Standard deviation
Failure	Internal	Before	3.06	0.69
		After	2.52	0.60
Failure	External	Before	2.47	0.69
		After	2.51	0.83
Success	Internal	Before	3.56	0.69
		After	2.99	0.69
Success	External	Before	2.69	0.83
		After	2.72	0.72

Interview

Twenty-one students who participated in the research were also interviewed during the course. During the interview they were asked to refer to various dimensions of exposure to the distance learning environment. The interviews underwent content analysis. The students' answers by topics are presented in the following tables.

Table 2: Distribution of the answers to completing the statement: "If I received a high grade in this course it is because …".

The reason	Frequency	Percent
Effort	12	57.1
Luck	2	9.5
Ability	1	4.8
Interest in the course	2	9.5
Succeeded in doing what I wanted	1	4.8
I am a good student	1	4.8
I knew the material	2	9.5
Total	21	100

Table 3: Distribution of the answers to the question: "What are, in your opinion, the reasons for failure in studies?" (multiple response).

The reason	Frequency	Percent of all subjects
Lack of interest/ lack of motivation	12	57.1
No ability/understanding/ knowledge	5	23.8
No effort/presence/fulfilling tasks	19	90.5
Lecturer not clear/hard tests	6	28.6
Course not built well/the framework/distance learning	2	9.5
Luck	1	4.8
Total	45	214.3

Students' attitude to effort factors versus ability factors in attribution of internal reasons for success in distance learning

Approximately 29% of the students were active participants in the course to a very great extent, 38% were active participants to a great extent and 33% were participants to a certain extent.

The distribution of the reasons for the students' success is presented in Table 4 (each student could indicate more than one reason).

Approximately 81% of the students indicated their involvement in the course as a reason for success in the course. Approximately 43% indicated good tasks, 38% indicated good formulation and quality of the announcements, 33% indicated the crystallized team as a reason for the group's success, 24% indicated interest in the course, experience, and 24% indicated understanding the material by experience. Differences in the students' tendency to attribute internal or external factors to their success in studies as examined by the attribution of success and failure factors questionnaire, which was given to the students at the end of the course, can be observed among the students who chose (or did not choose) any of the answers to the question: "On what does your success in the course depend?" (Table 4).

Table 4: Distribution of the answers to the question: "On what does your success in the course depend?" (multiple response).

Success depends	Frequency	Percent of all subjects
Lecturer	3	14.3
Crystallized team	7	33.3
Good tasks	9	42.9
Involvement in the course (participation)	17	81.0
Contribution of the student to the various communities	10	47.6
Good formulation and quality of announcements	8	38.1
Interest in the course, the experience	5	23.8
Understanding the material by experiencing	5	23.8
Total	64	304.8

Students' attitude to the nature of the task versus luck in attributing external reasons to failure in distance learning

Approximately 52% of the students will be very disappointed if they receive a low grade in the course, 19% will be somewhat disappointed, 14% will not be disappointed and an additional

14% will blame the lecturer if they receive a low grade (Table 5). Differences in the students' tendency to attribute internal or external factors to failure in their studies, as tested by the attribution of success and failure factors questionnaire given to the students at the end of the course, according to their disappointment if they receive a low grade (as presented in Table 5), were analyzed by one-way analysis of variance (ANOVA). The differences were found to be non-significant (p>0.05).

The students were asked what they thought was the reason for their not obtaining a good grade in the course (each student could indicate more than one reason). The findings are presented in Table 6. When attributing external reasons to their failure, approximately 29% indicated that they thought that the lecturer was to blame. Twenty-nine percent indicated that the reason was that the subject was not interesting/the course was not constructed well, 14% indicated bad work of the team and 9% indicated lack of frontal encounters. When attributing internal reasons to their failure, approximately 81% indicated lack of participation/effort, 33% indicated inability to understand the material, 19% indicated lack of motivation/interest and 14% indicated derision (Table 6). Differences in the students' tendency to attribute internal or external factors for failure in their studies, as tested by the attributing success and failure factors questionnaire given to the students at the end of the course, between students who chose or did not choose any of the answers to the questions: In case you do not receive a good grade in the course, what in your opinion is the reason for that (as presented in Table 6), were tested using the t-test. The differences were found to be non-significant (p>0.05).

Table 5: Distribution of the answers to the question: "How will you feel if you receive a bad grade in the course?".

How will you feel?	Frequency	Percent
I will blame the lecturer	3	14.3
I will not be disappointed	3	14.3
I will be a little disappointed	4	19.0
I will be very disappointed	11	52.4
Total	21	100.0

Table 6: Distribution of the answers to the question: "If you receive a bad grade in the course, what do you think will be the reason for that?" (multiple response).

The reason	Frequency	Percent of all subjects
The lecturer is to blame	6	28.6
Uninteresting subject/ course not constructed well	6	28.6
Due to absence of frontal encounters	2	9.5
Bad work of the team	3	14.3
Lack of participation/effort	17	81.0
Derision	3	14.3
Lack of motivation/interest	4	19.0
Inability and not understanding the subject	7	33.3
Total	48	214.3

Discussion and conclusion

The main aim of this research was to examine the influence of a distance learning environment on students' attribution of factors for their success and failure. The research also examined factors in the distance learning system that influence the students' attribution of factors for success and failure. The research hypothesis was that an effect of the distance learning environment on the attribution of internal reasons for success would be found, with the the parameter of effort being higher than the

parameter of ability. The research examined differences in the tendencies of the students to attribute success to two factors that comprise internal reasons for success: Effort versus ability. The test was performed at the beginning of the course, i.e., before exposure to distance learning, and again upon finishing the course (i.e., after exposure to a distance learning environment).

The means of the tendency to attribute effort and ability as internal reasons for success indicate that before exposure to the distance learning environment the students tended to attribute their success more to ability than to effort. However, after exposure to the distance learning environment they tended to attribute their success more to effort than to ability. The difference in the tendency of the students to attribute success to effort, versus their tendency to attribute success to ability, was found to be statistically significant before, but not after, exposure to the distance learning environment. These findings support the research hypothesis.

The participants were also interviewed. During the interview the students were asked what, in their opinion, were the reasons for their success in their studies (in general). When referring to effort as an internal reason for success, approximately 43% of the students indicated motivation/will/love of the subject and approximately 76% indicated the effort in studies. When referring to ability as an internal reason for success, approximately 52% indicated personal ability and 33% indicated prior knowledge and understanding. The findings indicate that the students tend to attribute their success in their studies in general to internal factors, mainly to the parameter of effort versus ability.

When the students were asked what, in their opinion, was responsible for their success in the distance learning course, many students were found to attribute internal reasons (especially effort) for success in distance learning. Approximately 81% indicated their involvement in the course (effort) as the reason for success in the course and 43% indicated the good tasks they submitted. In contradistinction, personal ability as a reason for success in the course did not increase. Furthermore, when the students were asked to complete the sentence: "If I received a good grade in this course it was because…" they also answered effort (57%) versus ability (5%) (see Table 2).

These findings indicate that students tend to attribute their success in the course to internal reasons, mainly effort. It may be concluded that students attribute their success in studies in general, as well to their success in a distance learning course, mainly to the effort they invest. The student's ability was evaluated as being less important. However, analysis of the interviews indicated that only 38% of the students really made an effort in the distance learning course, compared with other non-distance learning courses. Thus, students attribute importance to internal factors for success mainly in the parameter of effort in distance learning, but only a relatively small group of students actually made a greater effort in this course compared with traditional learning courses.

The reasons for this may stem from the students' lack of interest in the topics of the various forums, the difficulty of the learned subject, difficulty with the many tasks of the course, lack of feedback from the lecturer, the interaction between the members of the team, etc. These results are in agreement with the findings of Hara, Bonk and Angeli[5], who found that most students limit their participation to the requirements of the course, since participation and persistence obligate personal responsibility and discipline regarding the learning. These reasons may lead to postponement of participation and entry into the forums. Studies that characterize the type of student who will succeed in distance learning describe the student as an independent student, with high motivation and self-discipline [24].

In the interviews, some of the students (33%) indicated that a traditional learning course is more appropriate for them and that they prefer to study with a teacher rather than by distance learning. Other studies found that many students think that they can pass this type of course more easily (i.e., will make less effort) and in practice this is not true. Distance learning obligates the student to exhibit self-discipline (Ziv, 1998). These findings support the findings of the present research, in which the students in their interview indicated that they thought the requirements in this course are minimal and found out that they had to make extensive efforts. Fifty-two percent of the students indicated that the course demanded more work and more tasks than a traditional learning course.

Before exposure to the distance learning environment students tended to attribute failure to a greater extent to the nature of the task than to luck. Even after exposure to the distance learning environment, the students tended to attribute their failure to the nature of the task more than to luck. Thus, no changes occurred in the students' attribution of failure to external factors.

The findings from the interviews are compatible with studies performed regarding the attribution theory, which found that attribution of failure to unstable internal reasons, such as lack of effort, in the end leads to higher expectations of success in the future. The person assumes that performance can be improved, if indeed more effort is invested (Bar-Tal, 1980). The group of students (81%) who indicated that failure is the result of lack of effort tends to persist in case of failure, since they feel that effort is a factor that can be changed and enables adaptation and change of future results. Furthermore, approximately 62% of the students indicated that the grades they receive reflect their knowledge. It can thus be concluded that most of the students in this course have an internal locus of control, i.e., they believe that their success and failure depend on them and not on the wish of others or on circumstances.

It can be concluded that the students understand that in order to succeed in their studies they must make an effort. Effort is the main factor for success in the course. The main reason for choosing distance learning is the belief that they have to make less of an effort in this type of course in order to succeed. When they discover that the distance learning course is difficult, they express disappointment, and lack of satisfaction. Indeed, the mean score for satisfaction given by the students for this course was 5.52 (on a scale of 1 to 10), indicating low satisfaction of the students from the course. Analysis of the results indicated that disappointment from the course was expressed mainly by students who believed that their failure resulted from external reasons. They blamed the lecturer or the system for their lack of satisfaction. In contradistinction, students with an internal locus refer to effort, desire and personal satisfaction. Their level of participation in the forums was high and their satisfaction from studying by distance learning was also high.

We can conclude that the main motive for studying is the achievement of the grade (81% of the students indicated that the grade is their motive for participating in the lessons). They chose distance learning mainly because the system appeared flexible and because it transmits the course in an easier and more understandable manner (76% of the students indicated that the flexibility of the system, convenience of time and place are the reasons for choosing distance learning). However, reality showed them that the situation is different and that a distance learning course is hard. Thus, students with external attribution are fast disappointed and blame the system, whereas students with internal attribution have a better understanding that their success depends on their effort and their motivation to succeed.

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