Effect of Collaborative Style in Learning Environment on Developing Expressive performance among Instructional Technology Students

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Abstract:

The current research aims to detect Effect of Collaborative Style (within groups/ between groups) in Learning Environment on Developing Expressive performance among Instructional Technology Students to employ it in the instructional process and benefit from its advantages. Experimental processing material is represented in an e-learning environment (Edmodo); Expressive performance skills are displayed through it. The research sample consisted of 60 learners of the third year students / Department of Education Technology / Faculty of Specific Education / Minia University. They were divided into two groups, each group consisted of (30 learners), the (first experimental group) learns through (the Collaborative Style within groups), and (the second experimental group) learns through (Collaborative Style between groups). The research tool was Expressive performance analysis Form. The results indicated that "There is no statistically significant difference at the level (0.01) between the average grades of students of the first experimental group (within groups Style) and the second experimental group (between groups Style) in the Expressive performance analysis Form".

Keywords:
Collaborative Style between groups - Collaborative Style within groups - Expressive performance
Introduction:

As a result of scientific and technological development in various fields, especially the field of computer and communications, online learning has emerged, which directly affected the processes of teaching and learning, allowing learners to continue their learning according to their circumstances, as well as various forms of learning, including E-Collaborative learning, the basics of which are interaction and discussion, and the sharing of students to build their learning in a social context of learning.

E-Collaborative learning is a pattern of learning in which learners work together through small groups, and share the task or achieve common educational goals through group activities, in a coordinated effort using various communication and communication services and tools across the web, thus focusing on generating, not receiving, knowledge. (Mohammed Khakis, 2003)

Mohammed Ibrahim (1999:79:80) explains the importance of expressive performance as it provides many ways of visual communication that enable learners to express feelings and ideas, which are characteristic of human behavior and begin to express those ideas and sensations through words, lines, movements, colors and shapes.

Feeling the problem:

The sense of the research problem stemmed from several sources, including:

1. Conflicting studies and research and the inconsistency of its results with regard to difference effect of Collaborative Style (within groups/between groups) With the existence of scientific evidence that supports each direction separately, which requires further studies in that direction.

2. E-Collaborative learning from innovations that require the training of education technology specialists to employ it and use it in the educational process.


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1 The American Psychological Association (APA) sixth-generation documentation system was used, with the name indicating the author, then the year of publication, then the page, and he mentioned the first and last name of the Arabic names.
Conference on E-Learning and Distance Education: Practice and Desired Performance (2013) and the Second International Conference on E-Learning (2011), which recommended the need to develop programs for preparing student teachers, to give them the skills needed to teach, and recommended the need to employ electronic collaborative learning and its style in the educational process.

Research problem:
The problem of the current research is in Developing the expressive performance of educational technology students by discovering the most appropriate method for cooperative e-learning (within groups / between groups) in an educational environment in terms of its effectiveness.

, and to confront this problem, the current research attempts to answer the following question:-
"what is the Effect of Collaborative Style in Learning Environment on Developing Expressive Performance among Instructional Technology Students?"

Research objective:
The current research aims to detect the impact of E-collaborative style (within groups/ between groups) in a learning environment among instructional technology students on developing expressive performance.

The importance of research
The importance of the current research has been given to both the learner and the instructional institution:

According for the learner:-
The educational value of research for learners is as follows:
1. Using of E-collaborative learning has a positive result in learning.
2. Emphasizing the role of the learner in the learning process and this was reflected in the research through, the learner's production of drawings, interaction with colleagues and teacher through available interaction tools and evaluation of the expressive performance of their productive drawings.

According for the instructional institution:
The educational value of the study in relation to the educational process is as follows:
1. The research emphasizes that the educational process is conducted not only for learning but also for mastery learning.
2. Make some recommendations that can contribute to increasing the effectiveness of the learning process.
3. Take advantage of research tools as an expressive performance analysis Form.

Search limits:-

The current search was confined to:-
1. **Human confines:**- The research experiment was applied to a voluntary random sample of the third year students, Department of Instructional Technology, Faculty of Specific Education, Minia University, due to the availability of the tribal requirements in the research sample from the skills of dealing with computers and the skills of dealing with the Internet.
2. **Temporal limits:** - The research experiment was applied in the second semester of the academic year (2020/2021).
3. **Content limits:** - current research experience is based on some topics related to expressive performance and the basis for evaluating the expressive performance of drawings.
4. **Spatial Limit:** The Internet (Edmodo E-Learning Environment) and the Scientific Research Laboratory in the Department of Education Technology at the Faculty of Quality Education, University of Minia

Research Methodology:-

The current research is based on the design of learning environment, so the descriptive approach was used in the study, analysis and design phase of the learning environment, the experimental treatment material of the social learning environment (Edmodo), and the semi-experimental approach when measuring the Effect of the independent variable (Collaborative Style) on the dependent variable (expressive performance) in the Calendar stage.

Research variables:-

The search included the following variables:-
1. Independent variable: Collaborative Style (within groups/between groups) in a learning environment.
2. Dependent variable: represented in expressive performance.

**Experimental design:**
In view of the nature of the research, experimental design 2×1 was selected with pre and post application search groups.

**Research hypotheses:**
There is a statistically significant difference at the level (0.01) between the average grades of students of the first experimental group (within groups Style) and the second experimental group (between groups Style) in the Expressive performance analysis Form

**The research sample:**
A sample of the Third year students, Department of Instructional Technology, Faculty of Specific Education, Minia University, consisting of (60) male and female students, and (30) male and female students for the exploratory experience.

**Research tool:**
The tool used in the research was: Expressive performance analysis Form.

**Experimental treatment material:**
Experimental processing material is represented in an electronic learning environment (Edmodo).

**Research terms:**
After reviewing the previous research and literature, procedural concepts for the search terms were reached as follows:

1. **Collaborative Style (within groups):**
Manage educational engagements among learning group members, so that each group works separately from other groups and is not allowed to share with other groups to the end of the required task.

2. **Collaborative Style (between groups):**
Manage posts and interact between members of the learning group internally and with members of other groups so that each group works separately from other groups as well as the possibility to share with other groups.
3. Expressive performance

Expressive performance can be procedurally defined as an intellectual and linguistic activity by learners to express what is inside them through their caricatures, measured by the measure of expressive performance.

Theoretical framework and previous studies:

E-Collaborative Style.

E-learning environments are characterized by the spirit of group and integration between individuals to accomplish what has been assigned to them, and this makes them more effective and develops social skills among students. (Eman El shrief, 2021, 9 (1), 99-230)

The role of students in the classroom is no longer limited to learning mastery, e-learning has helped to strengthen new teaching methods that rely on the learner and his abilities while giving him educational knowledge and skills, in addition to benefiting from the sources of learning on the Internet, allowing the opportunity to learn more than one individual, which calls for sharing with them, allowing them to discuss their ideas and put forward their opinions and views on what is reviewed in the learning environment. (Ibrahim Ahmed, 2018)

E-Collaborative learning emerged as a result of the employment and activation of modern technology in the educational process, whose idea was based on unique learning to personalize the educational process, but generated a strong desire to reduce the isolation of the learner through active learning and switch to the stage of interactive sharing of knowledge, which led to the development of educational practices at the level of learning and interaction. (Nabil El Sayed, 2016)

Definition of E-Collaborative learning

Ahmed Nazir, Walaa Marsa (2018, M28, P2) defined it as an online learning environment in which students learn by sharing educational discussions on learning topics and sharing them within or between groups by using different communication tools across the web, helping them solve educational problems and produce knowledge based on the quality of their discussions.
The importance of E-Collaborative learning

Eman Elshrief (2021, 9 (2) 453-560), Hisham Ali (635, 2019), Wafa Al-Desouki (2016, 137-138), Mahmoud Al-Hafnawi (2015), Mohammed Wali (2010), Edman (2010), Mohammed Khakis (2003-268) mentioned the advantages of participatory e-learning that can be determined in the following points:

1. Many educational theories such as cooperative learning, intended learning, distributed experiences, source-based learning and project-based learning are applied.
2. Individual responsibility for each individual is responsible for mastering his or her work through his activity and continuous interaction within the group over the network.
3. Collective return through the activity and work of the group and the extent to which it achieves the goals.
4. Removal of temporal and spatial restrictions: teachers and learners are not subject to classroom restrictions.
5. Easy sharing between learners: Information and business are shared between learners and communicated through various communication tools such as e-mail systems and video conferencing... etc.
6. Diversity of learning sources: Through e-sharing learning, learners can use search engines to obtain information and communicate with teachers and specialists to get the knowledge and information they need.
7. Develops higher thinking skills.
8. Learner is the focus of the educational process.

E-Collaborative learning Styles:-

There are many Styles of sharing that vary in their ability to help students communicate and interact with each other and with the teacher, exchange opinions and integration in task assessment, and through each Styles of distribution of tasks, sharing and interaction in a different way, an agreement is created to combine individual work to work.

Dividing students into groups of characteristics of the e-collaborative learning environment, especially with large numbers, then electronic collaborative takes several images, within groups, or between groups. (Hani Al-Sheikh, 2015)
Hassan Al-Bata (2015), Hassan Rajah (160-163, 2012), explained that E-collaborative learning (within groups) aims to engage learners in order to acquire skills to generate and apply knowledge, and distributes students to separate groups (From 4-6 learners in the group), then distributes students to teams, group members enter the e-course page to study educational content individually, and each team is tasked with sharing about the task required of them and raising the result of the task and coming up with unified results of the mission, and the teacher provides nutrition Constantly reviewing.

E-Collaborative learning (between groups Style) aims to engage groups to acquire the skill of generating and applying knowledge and distributing students to groups that are not separate from each other(6 learners), group members enter the course page to study content individually, group members gather to discuss the results of the task and publish it to the rest of the groups, allow each group to see and evaluate the final product of each group, raise it and provide the teacher feedback.

In this context, Ahmed Abu al-Khair Study (2019) presented, which aimed to identify the impact of the design of E-collaborative learning Style (within groups/between groups) using web applications 2.0 in the development of electronic lesson production skills of al-Azhar teachers, and the results resulted in E-collaborative learning Style (within groups) is superior to that of sharing (between groups) and the study of Mohammed Hussein, Zainab Amin (2018), Which aims to design two strategies for participatory learning (within groups, between groups) to develop knowledge management skills among middle school students, and the results were achieved by students of the first experimental group, which used the participatory learning strategy (within groups) from the second experiment the group that used learning Participatory (Between Groups), Ahmed Nazeer’s Research, Walaa Morsi (2018), which aims to identify the most appropriate management style of electronic discussions (teacher vs. peers) as part of its interaction with the participation strategy (within groups-between groups) in a web task implementation environment and study its impact On solving field training problems, producing knowledge and quality discussions. Among
educational technology students, the results did not result in any statistically significant differences between the first experimental group and the second experimental group due to the effect of the participatory learning strategy within the groups versus the strategy between the groups. 

**Expressive Performance**

The expression is the basis of composition is an emotional state that the artist lives during the production of the painting where all his feelings work to formulate its elements according to the topics or ideas he wants to put forward and address to be the title of a certain idea that attracts the feelings of others, color is a language that the artist deals with in the way of composition or analysis, depending on the composition, lines and font here the form that the artist puts within a framework and space to give an element of meaning and significance, and the font is one of the important elements that the artist employs within the construction of the artwork It organizes and distributes lines in directions and axes that help move the viewer's eye from one point to another on the work surface until it eventually reaches a composition that carries conscious linear aesthetic values with expressive connotations. (Abdullah Isa, 2015)

Expressive performance is the learner's ability to produce works that express his thoughts and feelings and help him translate them into geometric lines, colors and forms. (Ihsan KhadraoWei, 2015)

Expression in the work of art is an expressive means with which the learner interacts and uses it to express his or her own thoughts, feelings and feelings, taking into account the foundations and elements of the work. (Abdullah al-Zahrani, 2010, 21)

**The importance of expressive performance**

1. It works to develop the emotional side: it means the extent of the learner’s sense of artistic work that helps him develop his sense or emotional awareness, which is the dominant aspect of the learner’s thinking. (Hamdi Khakis 23.1993)
2. Developing the self-confidence of learners, as it increases the opportunity to express their personal desires and the practice of learners for their different aspects of activity makes them feel
themselves and their entity because they are works that have a practical or tangible character, and they are works that have room to express the special preparations and tendencies of the learners. 3. Time management, as it exploits the leisure time of learners.

3. Connecting the learner to his environment through artistic expression of the customs, traditions and social manifestations of this environment.

4. Respect the freedom of artistic expression in its forms among the learner to feel his humanity and encourage him to practice more artistic practices.

5. Develop participatory work through positive participation in the implementation of works of art and analysis to reach the best work of art.

6. Encourage the learner to analyze the artwork and express his opinion to gain new experiences in evaluating various works of art. (Akram Qansu, 1996,16), (Khaled Al-Saud,119,2010)

7. Drawings are a means of helping to communicate with others, a language in which individuals interact and whose alphabet differs from the alphabet of verbal language, and show us how the individual grows and rises mentally, intellectually and emotionally, and that expressive performance is a kind of focus of attention that helps Searching and observe. (Ghoneim and Hamzawi 2014)

8. Help learner understands the relationships and links between shapes, colors, lines and spaces.

Expressive performance combines symbolism and pronunciation, in which the individual expresses things that no one else knows and individuals in constant need of opportunities to express them and many things that they have not experienced before, and visual symbols are more honest to express these things, and therefore expressive performance is a connection between the individual and himself, the individual who is not fluent in verbal language is fluent in an easier language and closer to communicate his thoughts and feelings. (Mustafa Abdel Aziz, 2014, 37)

The relationship between E-Collaborative Learning Style and expressive performance
E-Collaborative Learning is based on social interaction among learners as they share common educational goals using various communication and communication services and tools across the web, and therefore focuses on generating knowledge and not receiving it (Edman, 2010, 101), and this is evident in the stages of graphic production where the learner interacts with his peers and shares their opinions. On the idea of drawing, writing dialogue, choosing colors, and after completing the drawings, he reads comments on drawings over the web or by asking his staff what they think of the drawings to produce distinct drawings and peers analyze the drawings and clarify the significance of each component of the drawing.

This is consistent with the results of Ahmed Abdul Kafi's study (2018) to increase cognitive achievement, skill performance and develop self-organizing skills for learning among students of the 2nd Division education technology department, as a result of design an e-learning environment based on different levels of sharing (simple-medium-dense).

**Research procedures:**

Current Research procedures are:

1. Access to many studies, references, books and periodicals related to the topic of research in order to prepare the theoretical framework and experimental material processing, and research tools.
2. Designing, producing and submitting experimental treatment material to a number of arbitrators for approval and making amendments thereto.
3. Preparation of the measuring instrument (Expressive performance analysis Form), and surveying the opinion of the arbitrators on the validity of the tool for application, then calculating the statistical constants for it.
4. Conduct the research reconnaissance experiment to adjust the study tool, find out the appropriateness of the experimental treatment material, determine the time plan for completion of its study, and account for problems or difficulties that may arise during the implementation of the basic research experiment.
5. Conducting the basic experiment for research according to the following steps
   - Selection of a voluntary random sample from the Third year students, Department of Instructional Technology, Faculty of Specific Education, Minia University for the academic year 2020/2021.
   - Execute the pre-measurement (Expressive performance analysis Form) tool to the research sample.
   - Apply experimental treatment material to the research sample.
   - Apply the measurement tool (Expressive performance analysis Form) dimension to the research sample.
6. Obtaining and statistically processing data to test the validity of hypotheses and to arrive at, discuss, and interpret results.
7. Providing recommendations and proposed research in light of the results.

Form for the analysis of the expressive performance of caricatures:
1. Determination the purpose of the Form:
   It aims to analyze the educational Caricature produced by the third year students, Department of Instructional Technology Department.
2. Defining the Form Axes:
   The Form contains (30) indexes branching out of (8) basic axes.
3. Drafting Expressive performance analysis Form phrases
   When formulating phrases, it was taken into account:
   - Linguistic integrity and clarity of meaning.
   - Contain the phrase on one idea.
4. Presenting the initial image of the card on a group of arbitrators:
   The initial image of the scale was presented to a group of arbitrators in order to express their opinion on the following:
   - How important of each phrase of Form.
   - The validity of the language.
   - Delete any inappropriate phrases from their point of view.
   - Adding any phrases they think are required
5. **Final Shape of the expressive performance analysis Form:**
   The arbitrators indicated that some phrases that did not fit the card should be deleted, and that others were added to make the Form in final Shape.

6. **Calculating the scientific transactions of the expressive performance evaluation card (honesty, stability):**
   **Firstly:**
   - **honesty:** The validity of the card was calculated by:
     - The arbitrators believed: the appropriateness of the Form was determined as a measurement tool by presenting it to (13) Arbitrators, to ensure the validity of the Form and its suitability for the research group, and their opinions Approved that the Form measures what was developed to measure it and that it fits the search group.
     - **Validity of the peripheral comparison:** The card was applied to Exploratory sample of (30) learners, and the learner's scores were arranged in descending order to determine the highest quadrants to represent a group of high-level learners in the skills under study (33%) and the lowest quadrants to represent the low-level group of learners in those skills by (33%) and the significance of the differences between the two groups was calculated.

   **Table (1) Indication of differences between the higher and lower quarters in the expressive performance rating Form Under consideration in man-Whitney No barometer method (n = 20)**

<table>
<thead>
<tr>
<th>Value</th>
<th>W</th>
<th>U</th>
<th>Top Quadrant</th>
<th>Lower Quadrant</th>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Average grades</td>
<td>Total ranks</td>
<td>Average grades</td>
</tr>
<tr>
<td>-3.80**</td>
<td>55.00</td>
<td>0.00</td>
<td>15.50</td>
<td>155</td>
<td>5.50</td>
</tr>
</tbody>
</table>

   (**D at 0.01 (*) D at 0.05**

   There are statistically Significant differences between the upperquartile group that represents high-level learners in the skills under study and the lower quartile group that represents learners with a low level in the skills under study for the higher quartile group, as all values are statistically significant at the level of significance (0.01), which Indicates the validity of the card and its ability to distinguish between groups.

   **Secondly, Stability:**
The stability of the analysis model was calculated by calculating the correlation coefficient between the three assessors (X, Y, P) by applying it to an exploratory sample of (30) students whose performance was monitored and then calculating the correlation coefficient between the scores.

Table (2) Stability transactions for the expressive performance rating card (n = 30) (**D at 0.01 (*) D at 0.05)

<table>
<thead>
<tr>
<th>Observations</th>
<th>X.Y</th>
<th>X.P</th>
<th>Y.P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Link coefficient</td>
<td>0.83**</td>
<td>0.95**</td>
<td>0.78**</td>
</tr>
</tbody>
</table>

The high stability transaction values between the three evaluators are evident at the indication level (0.01), indicating that the analysis Form has a high degree of stability.

Research results:

Regarding the imposition of the research which states" there is a statistically significant difference at the level (0.01) between the average grades of students of The first group (within Groups of E-collaborative Style) and the second experimental group (Between Groups of E-collaborative Style) in the expressive performance Analysis Form."

To verify the validity of the hypothesis of the comparison between the first experimental group and the second experimental group, the T-Test was used to identify the significance of the difference between the two experimental groups. The results of an expressive performance analysis Form are presented below.

Table (3) averages, Standard deviations and indication (t) of the First experimental group and the Second experimental group in the remote application of the Form to evaluate the Expressive performance of the Caricature drawings.

<table>
<thead>
<tr>
<th>Imp size</th>
<th>ETA box</th>
<th>Sig level</th>
<th>value of Sig level</th>
<th>Deg of freedom</th>
<th>value of &quot;T&quot;</th>
<th>scale deviation</th>
<th>Av/arith</th>
<th>Num</th>
<th>Gr</th>
<th>T/ Deg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big</td>
<td>0.84</td>
<td>Not sign</td>
<td>0.75</td>
<td>58</td>
<td>0.53</td>
<td>3.26</td>
<td>79.17</td>
<td>30</td>
<td>(1)</td>
<td>87</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.28</td>
<td>78.87</td>
<td>30</td>
<td>(2)</td>
<td></td>
</tr>
</tbody>
</table>

By extrapolating the results in the table (3) it becomes clear that the calculated value (T) was (0.53) which is not a statistically significant value, where the value of the semantic level is (0.75), which is not statistically significant. Therefore, the hypothesis is
rejected and reformulated, that is, there is no statistical difference at the level (0.01) between the average scores of the students of the first experimental group (within groups) and the second experimental group (between groups) in the expressive performance analysis Form.

**Interpretation of the results:**

1. Both groups learn through the cooperative learning method (within groups - between groups) which has had a noticeable effect on increasing awareness and mastering the standards and foundations of Expressive performance.

2. Edmodo's E-learning environment provided interaction of all kinds (teacher with learner - learner with learner - learner with content) and sharing between the two groups and the use of communication tools led to an increase in the Expressive performance scorecard for the two groups.

3. Facility of using Edmodo E-learning environment teaches us to make the best use of the E-learning environment easily. Thus, the content is easily accessible and Mastering the skills and carrying out the required activities, communication and interaction with learners All this led to a mastery and an increase in the expressive performance of the two groups.

4. Diversity of activities and learning resources in the learning environment, including videos, images, and infographics, led to attracting learners' attention to the content, and as a consequence, an increase in the Expressive performance Form.

5. The association of educational content with the practical and the performance aspect led to the integration of the high level of expressive performance in the two groups.

6. Through social structural theory, the learning process is based on organizational methods that enable the learner to feel the surrounding environment and motivation plays a key role in this interaction, so in sharing drawings, learners have motivation to know how good their drawings are produced and compete with their colleagues.

7. The negotiation process is the basis for the formation of generalizations because it leads to consensus on a topic, after
sharing caricatures they are evaluated by peers to see how good they are.

8. Mastery and access to modern knowledge are the goal of learning according to communication, the purpose of sharing drawings is to obtain high quality graphics, and learning has a final goal, since the purpose of sharing graphics electronically is to develop the expressive performance of learners.

9. This result agrees with the results of the study of Ayman Madkour (2019), Ahmed Nazir (2018) and Hani Sheikh (2013), whose results confirmed the equal effect of both types (between groups) (within groups) in developing different performances.

**Research recommendations:**

1. The necessity of applying E-Collaborative learning style (between groups) within educational institutions.

2. The necessity of training educational technology professionals and computer educators in the optimal use of collaborative e-learning (within and between groups).

3. Adopting a strategic plan for the use of expressive performance in the different educational stages.

**Suggested researchs:**

1. Conduct research on social learning platforms and other variables such as: deep learning, engaging in learning.

2. Conduct research on how to activate the use of expressive performance in different university study groups.

3. The effectiveness of using expressive performance to develop higher thinking skills.

4. Study the relationship between expressive performance and visual thinking among students of education technology.

5. Study the impact of different Collaborative learning Style on higher thinking skills.
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