



Fayoum University
Faculty of Education

**The Effect of The Interaction between the Pattern of Delivering
E-Learning and The Cognitive Style on Developing E-Content
Production Skills of Educational Technology Students
at The Faculty of Specific Education**

**A dissertation submitted for the Ph.D. Degree in Education
in the field of Educational Technology**

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The Summary

This research is one of the Aptitude Treatment Interaction researches, So this research aimed to treat the deficiency of e-content production skills of Educational Technology students by providing an e-learning environment and studying the effect of the interaction between the pattern of delivering e-learning (whole/partial) and the cognitive style (Field Dependence versus Field Independence).

As in the whole pattern, The full skill is provided and presented to the students first and then the students apply it, but in the partial pattern the skill is divided into parts or performance steps, so that it can displayed step by step, where students apply each step of performance after its presentation or after following the necessary instructions to apply the step. The Gestalt Theory or Field Theory is one of the theories which support the whole pattern, while the theory which supports the partial pattern is Reinforcement Theory. So, this research aimed to identify the best delivering pattern of skill in e-learning environments to both of dependent student and independent students by studying the effect of the interaction between them.

The researcher prepared a list of e-content production skills and designed an achievement test to measure the cognitive aspect of e-content production skills and designed a skill card to measure the practical aspect of e-content production skills and also designed an evaluation to evaluate the quality of students' production of e-content. Whereas the researcher used The Embedded Figures Test (collective form) to classify the students according to their cognitive style (Field Dependence versus Field Independence).

The research sample has been consisted of (56) fifty-six students from the third year students of the Department of Educational Technology at the Faculty of Specific Education in Fayoum University for the academic year 2015/2016. And it has been divided into four groups:

1. The first experimental group (The field independent students) and the skills of e-content production have been provided using (whole pattern), and the number of this group is (13) students.
2. The second experimental group (The field independent students) and the skills of e-content production have been provided using (Partial pattern), and the number of this group is (14) students.
3. The third experimental group (The field dependent students) and the skills of e-content production have been provided using (whole pattern), and the number of this group is (14) students.

4. The fourth experimental group (The field dependent students) and the skills of e-content production have been provided using (partial pattern), and the number of this group is (15) students.

It has been ensured that there is equivalence among the four groups by applying the both tools of measurement (The Achievement Test/ The Skill Card) before application. Then the four experimental treatments were presented to students. Every group has its own experimental treatments. After that the post applying for the measuring tools (The Achievement Test/ The Skill Card/ The Evaluation card) has been done.

The most important results the research reached are as follows:

- Using the partial delivering pattern is better than using the whole pattern in developing the practical aspect of e-content production skills with the field dependent students. But there is no statistically difference between them in the cognitive style of these skills and also the quality of the product which students produced.
- The field independent students are more excellent than the field dependent students in both the cognitive aspect of e-content production skills and the quality of e-content production. But there is no statistically difference between them in the practical aspect of skills.
- There are statistically differences among the experimental groups in the practical aspect of these skills due to the interaction between the delivering pattern and the cognitive style. Whereas there are no statistically differences among the experimental groups in the cognitive aspect of these skills and the quality of production due to the interaction between the delivering pattern and the cognitive style

This Research recommends using the partial pattern in delivering the skills through the e-learning environments if most of the students are field dependents because the partial delivering pattern to skills is the best for them. And also recommends designing adapted e-learning environments which provide treatments according to the cognitive styles of learners and their abilities and aptitudes. As the environment is the same but the styles of treatment for each learner differ according to the pre-tests which are performed by the learner to detect his cognitive styles. And also training the developers of e-content and educational technology specialists on designing and developing the skills with the partial pattern, whereas the most of e-learning environments deliver them with the whole pattern only.