The Relationship between Management and Information Systems Students' E-Learning Styles and Attitudes towards E-Learning in Turkey during Covid-19 Pandemic

Authors

Nazlıcan Lüle Ercan[1*]

Affiliations

[1]Master's Program in Management Information Systems, Graduate School of Social Sciences Yeditepe University, Istanbul, 34755, Turkey

*To whom correspondence should be addressed; E-mail:nazlican.luleercan@std.yeditepe.edu.tr

Abstract

This research aims to investigate the relationship between e-learning styles and attitudes towards e-learning of Management Information Systems students who have experienced e-learning during Covid-19 pandemic and the change in terms of gender and grade level. This study was conducted with 114 participants. Two instruments were used.

The results showed that audio-visual learning style is the learning style that the participants have the most. The higher e-learning predisposition scores means the participants have positive attitudes to use e-learning. The lower e-learning predisposition scores means the participants have negative attitudes to use e-learning. On the other hand, e-learning avoidance scores were calculated with reverse matter method. The answers of the participants to e-learning avoidance items were calculated with their reverse value.

The higher e-learning avoidance score means the participants have positive attitudes to e-learning. The lower e-learning avoidance score means the participants are likely to avoid e-learning.

Independent learning style has positive and meaningful correlation with e-learning predisposition and e-learning avoidance. Audio-visual learning style has positive and meaningful correlation with e-learning predisposition and e-learning avoidance. Verbal learning style has positive and meaningful correlation with e-learning predisposition. The results presented that there is a statistically significant difference between male and female participants in terms of e-learning avoidance. On the other hand, in terms of e-learning predisposition and e-learning avoidance there are statistically significant differences between grade levels. Moreover, it was obtained that there is statistically significant difference between male and female participants in terms of independent learning, active learning, and verbal learning. As a result of the tests, statistically significant difference was found between grade levels in terms of independent learning, social learning, active learning, logical learning, audio-visual learning, verbal learning and intuitive learning.

Keywords: Attitudes towards e-learning; e-learning;learning

INTRODUCTION

Covid-19 pandemic is a worldwide crisis which was started in 2019 in Wuhan, China. This pandemic has been affecting the countries all around the world in different areas. Because of this highly influential outbreak, the countries felt a need to take precautions like social distancing, handwashing, wearing face masks. In some countries, citizens have experienced lockdowns for a certain time (Pokhrel& Chhetri, 2021).

According to the study of Pokhrel and Chhetri (2021), the Covid-19 pandemic affected approximately 1.6 billion learners all around the world. Both learners and teachers have experienced different types and techniques of learning through almost three years. In this time period, because of pandemic precautions schools were closed, educational institutes moved their whole system to online. Moreover, some learners and teachers got sick, and the educational practices disturbed. In the pandemic situation, schools and universities started to use e-learning tools more actively to give learners opportunities to engage learning environment (Subedi, Nayaju, Subedi, Shah and Shah, 2020).

During the Covid-19 pandemic, both learners and instructors faced a lot of problems about digital and online learning. Without the knowledge of e-learning types and attitudes towards e-learning, the learners weren't completely reached, and weren't provided learning needs. E-learning types of the learners can change from individual to individual. In the Covid-19 period, all the learners used the same type of learning materials. The researcher observed that this strategy didn't totally apply for all the users, especially for the learners who are in Management and Information Systems Department.

The researcher strongly suggests that the e-learning types of the students who are in Management and Information Systems Department should be investigated, and new learning materials and strategies need to be developed according to these results.

This research aims to investigate the relationship between e-learning styles and attitudes towards e-learning of Management Information Systems students who have experienced e-learning during Covid-19 pandemic.

In this research, there are six research questions.

This research aims to investigate the relationship between e-learning styles and attitudes towards e-learning of Management Information Systems students who have experienced e-learning during Covid-19 pandemic. The participants of this study are the students in Management Information Systems Department of Yeditepe University who experienced e-learning during Covid-19 pandemic. The population includes Management Information Systems students who are first graders, second graders, third graders, fourth graders. Moreover, graduate students in Management Information Systems Master Program also are in the population of this study.

The instruments were presented via online survey tool, Google Forms. The number of participants who completed the survey voluntarily is 120. However, 6 of the participants indicated that they are studying in different departments. Their data was deleted.

The participant of this study consists of 66 females and 48 males.

The participants of this study include 6 first year students, 24 second year students, 30 third year students, 12 fourth year students and 14 graduate students.

The participants of this study consist of 6 people with the age 18-20, 66 people with the age 21-23, 12 people with the age 24-26, 30 people with the age 27 and above.

In this study, Gülbahar and Alper's (2014) E-Learning Styles Scale for Electronic Environments and Haznedar and Baran's (2012) General Attitudes Towards E-Learning instrument are used. Moreover, to gather demographic and personal additional questions are presented. In order to gather data about participants' Covid-19 pandemic experiences, 6 additional items are presented. The questions about demographic and personal information, two instruments and 6 additional Covid-19 pandemic questions are prepared in online survey and presented to participants online.

In the first section of the survey form, participants' e-mail, gender, department, grade, and age information are taken.

In this study, quantitative correlational research design model is used. According to Gay and Mills (2011), correlational research design is collecting and gathering data to state the relationship between two or more variables. The relationship degree between variables is explained as a correlation coefficient. The aims of the correlational research are establishing relationship between two variables and using this relationship to make predictions (Gay & Mills, 2011, p.204). Variables that are used in correlational studies can be scored. Sample size must be over 30 participants.

The result of the study gives the researcher the opportunity to define if and to what degree the variables are related to each other. The correlation between two variables is obtained by a correlation coefficient. This coefficient can take values from -1.00 to +1.00. The correlation coefficient shows the size and the direction of the relationship between two variables. The result doesn't determine a causal relationship (Gay & Mills, 2011, p.204). In correlational research design, the scores of the variables are determined from all the participants and the pairs are correlated (Gay & Mills, 2011, p.205).
In this study, the instruments were presented online to the participants. Then, according to their responses to the items, the scores of the participants were calculated. After the calculations, appropriate statistical tests were applied to obtain correlational coefficient.

RESULTS

In this section, the test results of the research questions are provided. Under each research question, the results are presented.
Research question: What are the e-learning styles of Management Information Systems students?
When the results of the e-learning styles of Management Information Systems students are examined, the mean score obtained Audio - Visual Learning sub dimension is 32.37 points. Audio-Visual Learning has the highest mean score.
Research question: What is the level of Management Information Systems students' attitudes towards e-learning during Covid-19 pandemic?
The instrument that Haznedar and Baran (2012) developed has two factors. One of the factors is e-learning predisposition and the other factor is avoiding e-learning.
The results show that mean of the e-learning predisposition is 26.79 and the mean of the e-learning avoidance is 27.16. E-learning predisposition scores were calculated according to the answers of the participants. The participants gave answers from 1 to 5 points. The points were summed and presented as e-learning predisposition scores. The higher e-learning predisposition scores means the participants are positive to use e-learning. The lower e-learning predisposition scores means the participants are negative to use e-learning. On the other hand, e-learning avoidance scores were calculated with reverse matter method. The answers of the participants to e-learning avoidance items were calculated with their reverse value.

The higher e-learning avoidance score means the participants are positive to e-learning. The lower e-learning avoidance score means the participants are likely to avoid e-learning.

Research question: Is there a relationship between Management Information Systems students' e-learning styles and attitudes towards e-learning during Covid-19 pandemic?

According to Kolmogorov-Smirnov results, the significance values of independent learning, social learning, audio-visual learning, active learning, verbal learning, logical learning, intuitive learning, e-learning predisposition, and e-learning avoidance aren't normally distributed ($p < .05$).

In order to analyze the correlation between the e-learning styles and attitudes towards e-learning, one of the nonparametric test Spearman Correlation was used.

According to the results of Spearman Correlation Test, there is a positive and meaningful correlation between independent learning and e-learning predisposition ($r=.552$, $p<.05$). There is also a positive and meaningful correlation between independent learning and e-learning avoidance ($r=.559$, $p<.05$).

Between audio-visual learning and e-learning predisposition, there is a positive and meaningful correlation ($r=.284$, $p=.002$). Between audio-visual learning and e-learning avoidance, there is a positive and meaningful correlation ($r=.212$, $p=.024$). There is a positive and meaningful correlation between verbal learning and e-learning predisposition ($r=.257$, $p=.006$).

In accordance with the result, there is no correlation between social learning style and e-learning predisposition and e-learning avoidance ($p>.05$). Moreover, no correlation was found between active learning style and e-learning predisposition and e-learning avoidance ($p>.05$). There is no correlation between logical learning style ande-learning predisposition and e-learning avoidance ($p>.05$).

There is no correlation between verbal learning style and e-learning avoidance. Finally, there is no correlation between intuitive learning style and e-learning predisposition and e-learning avoidance ($p>.05$).

Research question: Do Management Information Systems students' attitudes towards e-learning during Covid-19 pandemic change according to students' gender and grade level?

The result of Kolmogorov-Smirnov test on e-learning predisposition and e-learning avoidance scores showed that these two scores are not normally distributed ($p<.05$).

As a result of this test, for the further analysis nonparametric tests must be used. To analyze the change in terms of gender in e-learning predisposition and e-learning avoidance Mann-Whitney U test was used.

The result of Mann-Whitney U Test shows that there is a statistically significant difference between male and female participants' e-learning avoidance scores ($p<.05$). On the other hand, according to the results of the test e-learning predisposition doesn't change according to the gender ($p>.05$)

To be able to analyze the change in e-learning predisposition and e-learning avoidance in terms of grades, the result of Kruskal-Wallis Test must be examined.

According to the Kruskal Wallis Test results, the statistically significant difference is seen in terms of grade levels in e-learning predisposition scores and e-learning avoidance scores ($p<.05$). In order to identify the statistically significant difference in terms of grade levels in attitudes towards e-learning further tests were applied between groups. According to Akbulut (2010, p.185), when a statistically significant difference is seen as a result of Kruskal Wallis test, to identify which groups have this statistically significant difference between them, Mann-Whitney U test must be conducted.

For e-learning predisposition and e-learning avoidance, the grade level groups were compared and tested. As a result of the nonnormally distribution of e-learning predisposition scores and e-learning avoidance scores, one of the non-parametric tests which is Mann-Whitney U test was applied.

According to the test results, in terms of e-learning predisposition there is a statistically significant difference between first year students and third year students. Third year students have statistically higher e-learning predisposition than first year students in this study ($U=36$, $p<.05$). Between first year students and fourth year students, there is also a statistically significant difference. First year students have more e-learning predisposition than fourth year students ($U=0$, $p<.05$). A statistically significant difference is determined between first year students and graduate year students. Graduate year students have more e-learning predisposition than first year students ($U=36$, $p<.05$). In terms of e-learning predisposition, there is also a statistically significant difference between second year students and third year students. Third year students have more e-learning predisposition than second year students in this study ($U=234$, $p<.05$). Moreover, between second year students and graduate year students, there is a statistically significant difference in terms of e-learning predisposition.

Graduate year students have statistically higher e-learning predisposition than second year students (U=342, p<.05). There is also a difference between third year students and fourth year students in terms of e-learning predisposition. Third year students have more e-learning predisposition than fourth year students (U=72, p<.05). Furthermore, there is also a statistically significant difference between fourth year students and graduate year students. Graduate yearstudents have higher e-learning predisposition than fourth year students in this study (U=72, p<.05).

On the other hand, the test results showed that there is no statistically significant difference between first year students and second year students, second year students and fourth year students and third year students and graduate year students in terms of e-learning predisposition (p>.05).

In accordance with the results, in terms of e-learning avoidance statistically significant differences were found between first year students and second year students, first year students and third year students, first year students and graduate year students. Moreover, there are significant differences between second year students and third year students, second year students and graduate year students, third year students and fourth year students, fourth year students and graduate year students.

According to the results, second year students have more e-learning avoidance than first year students (U=0, p<.05). Third year students have higher e-learning avoidance than first year students (U=0, p<.05). Graduate year students have more e-learning avoidance than first year students (U=0, p<.05). On the other hand, third year students have more e-learning avoidance than second year students (U=162, p<.05). Graduate year students have higher e-learning avoidance than second year students (U=252, p<.05). Third year students have statistically higher e-learning avoidance than fourth year students in this study (U=54, p<.05). Finally, graduate year students have more e-learning avoidance than fourth year students (U=36, p<.05).

The results showed that there is no statistically significant difference between first year students and fourth year students, second year students and fourth year students and third year students and graduate year students in terms of e-learning avoidance (p>.05).

Research question: Do Management Information Systems students' e-learning styles according to students' gender and grade level?

In order to analyze the change of e-learning styles of Management Information Systems students' according to the students' gender and grade, the normality of the data was checked.

According to Kolmogorov-Smirnov results, the significance values of independent learning, social learning, audio-visual learning, active learning, verbal learning, logical learning and intuitive learning don't have normal distribution ($p < .05$).

To be able to check the change of attitudes towards e-learning of Management Information Systems students' according to the students' gender, Mann-Whitney U test was used. Mann-Whitney U test is one of the non-parametric tests. Because of the scores of learning styles sub dimensions don't have normal distribution, non-parametric tests must be used.

According to the results of Mann-Whitney U test, there is a statistically significant difference between male and female participants that have independent learning styles ($U = 1008$, $p < .05$). Male participants have independent learning style more than female participants in this study. Moreover, the results shows that there is a statistically significant difference between male and female participants who have active learning styles ($p < .05$). According to the result of the test, female participants have more active learning style than male participants in this study. Furthermore, according to the results of Mann-Whitney U test, there is a statistically significant difference between male and female participants who have verbal learning styles ($p < .05$). In accordance with the test results, female participants have more verbal learning style than male participants in this study.

On the other hand, the results presents that there is no statistically significant difference between male and female participants that have social learning style, logical learning style, audio-visual learning style and intuitive learning style ($p > .05$).

In order to analyze the statistically significant difference between grade levels of the participants according to e-learning styles, Kruskal Wallis test was implemented. Kruskal Wallis test is one of the nonparametric tests to show difference between more than two groups.

According to the Kruskal Wallis Test results, the statistically significant difference is seen in terms of grade levels in the independent learning, social learning, audio-visual learning, active learning, verbal learning, logical learning, intuitive learning sub dimensions ($p < .05$).

In order to identify the statistically significant difference in terms of grade levels in e-learning styles further tests were applied between groups. For every e-learning style, the grade level groups were compared and tested. As a result of the nonnormally distribution of the e-learning styles, one of the non-parametric tests which is Mann-Whitney U test was applied.

The result showed that for independent learning style, there is a statistically significant difference between first year and second year students ($U=0$, $p<.05$). Second year students have statistically higher level of independent learning than first year students. The comparison of first year students and third year students showed that there is a statistically significant difference between first year students and third year students in terms of independent learning ($U=0$, $p<.05$). Third year students have statistically higher independent learning style than first year students. The test also showed that there is a statistically significant difference between second year students and graduate year students ($U=216$, $p<.05$). Second year students have higher independent learning style than graduate year students.

There is also statistically significant difference between third year students and fourth year students. Third year students have higher independent learning styles than fourth year students ($U=54$, $p<.05$). According to the result of the test, it is seen that there is a difference between third year students and graduate year students in terms of independent learning ($U=198$, $p<.05$). Third year students have statistically higher independent learning than graduate year students. In accordance with the test results, there is no statistically significant difference between first year students and third year students, first year students and graduate year students, second year students and third year students, second year students and fourth year students, fourth year students and graduate year students ($p>.05$).

According to the test results, the data showed that there is a statistically significant difference between first year students and third year students in terms of social learning style ($p<.05$). First year students have statistically higher social learning style than third year students in this study ($U=54$, $p<.05$). Also, the data presented that there is a statistically significant difference between second year students and third year students in terms of social learning style ($p<.05$). Second year students have more social learning style than third year students in this study ($U=162$, $p<.05$). In accordance with the results, there is a statistically significant difference between third year students and

fourth year students (p<.05). Fourth year students have statistically higher social learning styles than third year students (U=72, p<.05). There is also statistically significant difference between third year students and graduateyear students in this study (p<.05). Graduate year students have statistically higher social learning style than third year students in this study (U=252, p<.05). On the other hand, the test results presented that there is no statistically significant difference between first year students and second year students, first year students and fourth year students, first year students and graduate year students, second year students andfourth year students, second year students and graduate year students and fourth year students and graduate year students (p>.05).

According to the results, there is a statistically significant difference between first year students and third year students in terms of active learning style. First year students have statistically higher active learning styles than third year students (U=36, p<.05). Moreover, between first year students and fourth year students there is a statistically significant difference. First year students have higher active learning style than fourth year students in this study (U=0, p<.05). There is also statistically significant difference between first year students and graduate year students in this study. First year students have more active learning style than graduate year students (U=0, p<.05). In accordance with the results, there is a statistically significant difference between second year students and fourth year students. Second year students have higher active learning styles than fourth year students in this study (U=72, p<.05). The results showed that second year students and graduate year students are different in terms of active learning. Second year students have higher active learning style than graduate year students (U=252, p<.05).

On the other hand, the results showed that there is no statistically significant difference between first year students and second year students, second year students and third year students, third year students and fourth year students, third year students and graduate year students and fourth year students and graduate year students in this study (p>.05).

In accordance with the results, there is a statistically significant difference between first year students and second year students in terms of logical learning.

First year students have higher logical learning style than second year students (U=0, p<.05). Furthermore, a statistically significant difference is seen between first year students and third year students in terms of logical learning. First year students have more logical learning style than third year students in this study (U=18, p<.05). Between first year students and fourth year students, there is also a statistically significant difference. First year students have higher logical learning style than fourth year students (U=0, p<.05). There is a statistically significant difference between first year students and graduate year students. First year students have statistically higher logical learning styles than graduate year students (U=0, p<.05). According to the results, a statistically significant difference is presented between second year students and fourth year students. Second year students have more logical learning style than fourth year students (U=o, p<.05). There is also a statistically significant difference between third- and fourth-year students in this study. According to the results third year students have higher logical learning style than fourth year students (U=0, p<.05). Between third year students and graduate year students, a statistically significant difference was found. Graduate year students have statistically more logical learning styles than third year students in this study (U=378, p<.05). Moreover, between fourth year students and graduate year students there is a statistically significant difference. Graduate year students have more logical learning style than fourth year students in this study (U=0, p<.05).

On the other hand, statistically significant differences were not found between second year students and third year students, second year students and graduate year students (p>.05).

According to the test result, in terms of audio-visual learning style, a statistically significant difference was found between first year students and second year students. First year students have more audio-visual learning style than second year students (U=0, p<.05). There is also a statistically significant difference between first year students and third year students. First year students have more audio-visual learning style than third year students (U=0, p<.05). A statistically significant difference was determined between first year students and fourth year students in terms of audio-visual learning style. First year students have statistically higher audio-visual learning style

than fourth year students (U=0, p<.05). There is also a statistically significant difference between first year students and graduate year students in this study.

First year students have more audio-visual learning style than graduate year students (U=0, p<.05). Between second year students and graduate year students, there is also a difference. Graduate year students have statistically more audio-visual learning style than second year students (U=342, p<.05). Also, there is a statistically significant difference between third year students and graduate year students. Graduate year students have higher audio-visual learning style than third year students in this study (U=378, p<.05).

Additionally, statistically significant differences were not found between second year students and third year students, second year students and fourth year students, third year students and fourth year students and fourth year students and graduate year students (p>.05).

According to the test results, statistically significant differences were found between first year students and second year students, first year students and third year students, first year students and fourth year students, first year students and graduateyear students, second year students and third year students, second year students and fourth year students, third year students and graduateyear students and fourth year students and graduateyear students in terms of verbal learning style (p<.05).

However, there are no statistically significant difference between second year students and graduateyear students, third year students and fourth year students in terms of verbal learning style (p>.05).

First year students have more verbal learning styles than second year students, third year students, fourth year students and graduateyear students. Second year students have statistically higher verbal learning style than third year students and fourth year students. Third year students have more verbal learning styles than graduateyear students (U=360, p<.05). Finally, fourth year students have more verbal learning style than graduateyear students in this study (U=144, p<.05).

According to the test results, statistically significant differences were found between first year students and third year students, first year students and fourth year students, first year students and graduateyear students, second year students and third year

students, second year students and fourth year students, second year students and graduateyear students, third year students and fourth year students and third year students and graduateyear students in terms of intuitive learning style ($p<.05$). However, there are no statistically significant difference between first year students and second year students, fourth year students and graduateyear students in terms of intuitive learning style ($p>.05$).

First year students in this study have statistically higher intuitive learning style than third year students, fourth year students and graduateyear students ($p<.05$). Second year students have more intuitive learning style than third year students, fourth year students and graduateyear students ($p<.05$). On the other hand, third year students have statistically higher intuitive learning style than fourth year students and graduateyear students ($p<.05$).

Research question: What is the level of Management Information Systems students' satisfaction about their schools' e-learning system during Covid-19 pandemic?

In the online survey instrument, six questions were presented to the participants to have their satisfaction level about their school's e-learning system during Covid-19 pandemic.

When the results of the level of Management Information Systems students' satisfaction about their school's e-learning system during Covid-19 pandemic was examined, the mean score obtained from satisfaction level is 18.53 points. The total satisfaction score can be gathered from satisfaction related questions was 30 points. The mean is lower than the total score. The level of Management Information Systems students' satisfaction about their school's e-learning system during Covid-19 pandemic is low.

DISCUSSION

The purpose of this study is to analyze the relationship between e-learning styles and attitudes towards e-learning of Management Information Systems students who have experienced e-learning during Covid-19 pandemic and the change according to gender and grade level.

The results presented that the e-learning styles change according to grade levels and gender. Moreover, the e-learning predisposition and e-learning avoidance change according to e-learning styles.

CONCLUSION

The results presented that audio-visual learning style is the learning style that the participants have the most. The higher e-learning predisposition scores means the participants have positive attitudes to use e-learning. The lower e-learning predisposition scores means the participants have negative attitudes to use e-learning. The higher e-learning avoidance score means the participants have positive attitudes to e-learning. The lower e-learning avoidance score means the participants are likely to avoid e-learning.

Independent learning style, audio-visual learning style has positive and meaningful correlation with e-learning predisposition and e-learning avoidance. Verbal learning style has positive and meaningful correlation with e-learning predisposition. The results presented that male participants have higher e-learning avoidance scores than female participants in this study. On the other hand, in terms of e-learning predisposition and e-learning avoidance there are statistically significant differences between grade levels. In terms of e-learning predisposition, first grade students have statistically higher results than third grade students, fourth grade students and graduate year students. Second grade students have higher e-learning predisposition than third grade students and graduate year students. Third year students have more e-learning predisposition than fourth grade students and fourth grade students have higher e-learning predisposition than fifth grade students. In terms of e-learning avoidance, first year students have higher scores than second year students, third year students and fifth year students. Moreover, second year students have higher e-learning avoidance than third year students and fifth year students. Third year students have higher e-learning avoidance than fourth year students. Finally, fourth year students have more e-learning avoidance than fifth year students. Moreover, it was obtained that there is statistically significant difference between male and female participants in terms of independent learning, active learning, and verbal learning. Male participants have higher independent learning style than female participants. Female participants have more active learning style and verbal learning style than male participants. As a result of the tests, statistically significant difference was found between grade levels in terms of independent learning, social learning, active learning, logical learning, audio-visual learning, verbal learning and intuitive learning.

The reason that causes the correlation between independent learning and attitudes towards learning can be investigated with further studies.

The reason that causes the correlation between audio-visual learning and attitudes towards learning can be investigated with further studies.

There is a statistically significant difference between grade levels in terms of attitudes towards e-learning. Further research and studies can be done on the reason for this difference.

In terms of e-learning styles, statistically significant difference were found between grade levels. Second year students have statistically higher level of independent learning than first year students.Third year students have statistically higher independent learning style than first year students.Second year students have higher independent learning style than graduate year students.Third year students have higher independent learning styles than fourth year students.Third year students have statistically higher independent learning than graduate year students.First year students have statistically higher social learning style than third year students in this study.Second year students have more social learning style than third year students in this study.Fourth year students have statistically higher social learning styles than third year students.Graduate year students have statistically higher social learning style than third year students in this study.First year students have statistically higher active learning styles than third year students.First year students have higher active learning style than fourth year students in this study.First year students have more active learning style than graduate year students.Second year students have higher active learning styles than fourth year students in this study.Second year students have higher active learning style than graduate year students.First year students have higher logical learning style than second year students.

First year students have more logical learning style than third year students in this study.First year students have higher logical learning style than fourth year students.First year students have statistically higher logical learning styles than graduate year students.Second year students have more logical learning style than fourth year students.According to the results third year students have higher logical learning style than fourth year students.Graduate year students have statistically more logical learning styles than third year students in this study.Graduate year students have more logical learning style than fourth year students in this study.

First year students have more audio-visual learning style than second year students.First year students have more audio-visual learning style than third year students.First year students have statistically higher audio-visual learning style than fourth year students.First year students have more audio-visual learning style than graduate year students.Graduate year students have statistically more audio-visual learning style than second year students.Graduate year students have higher audio-visual learning style than third year students in this study.First year students have more verbal learning styles than second year students, third year students, fourth year students and graduate year students. Second year students have statistically higher verbal learning style than third year students and fourth year students. Third year students have more verbal learning styles than graduate year students. Finally, fourth year students have more verbal learning style than graduate year students in this study.

First year students in this study have statistically higher intuitive learning style than third year students, fourth year students and graduate year students. Second year students have more intuitive learning style than third year students, fourth year students and graduate year students. On the other hand, third year students have statistically higher intuitive learning style than fourth year students and graduate year students.

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