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Investigating the connection between Learning Style and Gender among IGNOU Learners

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Abstract:

The specific aim of this research paper is to investigate the distant B.Ed. students preferred learning styles/way of learning must be taken into account in the study materials and contents connected instructional formats or design template applied in open and distance education. The research paper investigates and recognizes if students' preferred way of learning or styles of learning are known and identified, then it would be better possible to design an appropriate context of learning. In this research study, learning style of the student produces specially the 'enactive learning style', 'figural learning style' and 'verbal learning style' as measured by the learning style inventory explored in 2012 by Karuna Shankar Mishra. These majorly 03 and sub 06 dimensions are applied to examine the suitability of learning formations. 05 states have been selected randomly out of all Hindi-Belt States of India from which 05 institutions / study centers / program centers of IGNOU have been selected randomly again and total of 350 distant B.Ed. students selected as sample, answered the learning style inventory shared to them in a group form during their workshop sessions and collected data were examined and measured utilizing descriptive statistics using SPSS. The paper identifies learning styles with reference of gender in distance B.Ed. programme while recognizing the preferred 06 learning styles. The paper concludes that the achievement of open and distance education and its learners can be improved by providing learning materials, instructional designs and student support services in a manner compatible with each student's learning style.

Keywords: Learning style, Distance Learner, Gender, IGNOU.

Introduction:

Distance education is a learning instrument which shatters maximum of dissects in education as- gender, age, marital status, race, income, space, time etc. But in a distance education environment the procedure of student learning may be difficult and complex due to perceived issues faced by learners may be varied from one another. To develop the distance learning as a successful, powerful

and qualitative alternative of learning, characteristics and features of the distance learners necessary need to be explored. The differences among distant B.Ed. students may not only present in respect of their demographic characteristics but may also find with respect to their learning styles. Gardner (1993) and Sadler Smith (1996) reported that every student are varies and possessing varied learning preferences and styles. Grasha (1996) has invented a definition of learning styles that learning styles are individual traits of the learners' that influenced the learners' ability to grasp information, material, interact, answers with same groups and the instructors as well as to contribute in the learning procedure. Grasha and Yangerber-Hicks (2000) explained that learning style like students' likes or pattern for how do they prefer to learn. Mostly distance learners' belongs from varied demographic backgrounds and have their different profession, house chores and duties and have some experience of regular learning, so possibilities of broad similarities and dissimilarities in their learning pattern are natural and for successful outcome it must be investigated. The research work of **Nirjesh & Sharma, R. (2018)** explored that female got remarkably excessive score on manner of reproducing studying and on condition of overall studying styles verses male school students. There was non-significant dissimilarity on manner of constructive studying. It clearly showed that there was a notable difference among total learning style of female and male students. **Agarwal, S. & Suraksha (2017)** indicates significantly greater likes about style of figural and constructive studying rather than their opposite girls students who like better style of verbal and reproducing studying. **Agarwal, S. & Suraksha (2017)** studied multiple intelligence and learning styles - a correlational study to find out the connection between boy and girl students' multiple intelligence and style of learning. It was concluded in result of the study that girls student indicate more correlational scores than boys between the variables of multiple intelligence and style of learning's dimensions as enactive and verbal constructive. **Shete, A. N., Garkal, K. D., Yadav, N., Salwe, R., & Rainer, B. (2016)** explored The greater number of male students liked a one modal of learning, while more number of female students liked multimodal learning. **Babu, M. R. (2015)** studied Girl students indicated better liking from opposite to boy in all the aspects of style of learning i.e. Enactive, figural, verbal, constructive and reproducing style of learning. **Aljohani, K. A. & Fadila, D. E. S. (2018)** explored that Desire for studying aspects was notably significant with respect to sex and in addition to background variables like age, residence, marital status and others affected the style of learning. **Akhlaghi, N., Mirkazemi, H., Jafarzade, M., & Akhlaghi, N. (2018)** explored that students' styles of learning were not affected by demographics like age, sex, and marriage level. **Escarlos Jr. J. A., Escarlos, G. S. (2018)** there was non-significant diversity got on the style of learning of the veterinary medical students in relation to sex. **Corbin, A. (2017)** Boys showed higher scores in independent, competitive, and avoidant and girls showed higher scores in dependent, participant, and collaborative approaches to learning.

OBJECTIVES OF THE STUDY:

Current study was undertaken with the objectives as below:

- i. To compare the Learning Style of Female and Male distant B.Ed. students.
- ii. To investigate the Enactive Reproducing learning style of Female and Male distant B.Ed. students.
- iii. To investigate the Enactive Constructive learning style of Female and Male distant B.Ed. students.
- iv. To investigate the Figural Reproducing learning style of Female and Male distant B.Ed. students.
- v. To investigate the Figural Constructive learning style of Female and Male distant B.Ed. students.
- vi. To investigate the Verbal Reproducing learning style of Female and Male distant B.Ed. students.
- vii. To investigate the Verbal Constructive learning style of Female and Male distant B.Ed. students.

Research Methodology:

This research work is a descriptive research work on the learning styles of distant B.Ed. students enrolled in IGNOU. Descriptive method of research is suitably applied in certain kind of investigation which goaled at explaining a current structure that presents and occurring in the uphold population. This study attentions on the preferences of distant B.Ed. students' learning styles as investigating information and data about it; explorations can become the creative educational instruments and support services for the teaching and learning procedures in B.Ed. programme offered by IGNOU. For examining learning style of distant B.Ed. students' researcher has planned to use a standardized tool 'learning style inventory' invented by Dr. Kausal Kishore Mishra in 2012. It can be administered in both form groups as well as individually. On the basis of this inventory, learning style stands in a way with which individual internally shows experiences and adapts any type of learning information and processes on preferably. This learning style inventory builds to inspect and measure 06 major learning styles namely- Enactive Reproducing, Enactive Constructive, Figural Reproducing, Figural Constructive, Verbal Reproducing and Verbal Constructive. After examining the total 42 statements relating to every learning style which has been categorized into 06 major formations has been put on the final structure of the learning style inventory.

The population of the study has been consisting distant B.Ed. students who are enrolled with IGNOU for the 2017/2018 academic session in Hindi-Belt States of India namely Bihar, Chhattisgarh, Delhi, Haryana, Himachal Pradesh, Jharkhand, Madhya Pradesh, Rajasthan, Uttarakhand, and Uttar Pradesh. 06 institutions / study centers of IGNOU have been selected

randomly from all Hindi-Belt States of India and from these institutions / study centers only 350 distant B.Ed. students has been taken as sample/subjects for this research study. Researcher used purposive sampling technique of non- probability sampling method to ensure that the subjects are truly represents the particular population.

Data Selection of Present Research Work:

Origin of data has been applied in the present work included of first hand / primary data in addition to subordinate / secondary data. Principle data were get via the *learning style inventory* and the secondary data were obtained through reviewing the related literatures like reference books, articles and research papers of journals, thesis and internet/online website resources. Data has been collected through administration of standardized *learning style inventory* in group during their workshop sessions, and students were asked to respond with their own experience and genuinely. The inventory used in this research study is the K. S. Misras' invented Learning Style Inventory. This is a 5 marks tick mark ($\sqrt{\quad}$) type inventory attention on learners' liked manner of adaptation of any type of learning information, processes, interaction and instructional preferences. It can be administered in both form groups of learners as well as individually to learners. According to this inventory learning style base in a means with which individual internally presents experiences. This learning style inventory builds to find and examine 06 major learning styles namely- Enactive Reproducing, Enactive Constructive, Figural Reproducing, Figural Constructive, Verbal Reproducing and Verbal Constructive. This learning inventory is appropriate for college or university students for exploring students' learning styles when interacting with instructors and co-learners.

Data analysis:

Suitable statistical methods and techniques have been adopted for statistical examination of data contingent on the characteristics of the collected data such as in descriptive techniques of analysis of statistics Means and Standard Deviations were applied to examine the variations among distant B.Ed. students' styles of learning in relation to age. This measurement is examined to be applied to measures the merit of the Mean score that varied notably. After that collected data were examined SPSS.

The analyzed data have been presented in table formation which is kept by their expounding or interpretation. The analysis, result and interpretation of the data have been followed through the order of the objectives and hypotheses of the current research study as follows:

1.0. To compare the Learning Style of Female and Male distant B.Ed. students.

To achieve this objective of the study the following null hypothesis was created and analyzed statistically:-

H₀₁: There is no significant difference between Female and Male distant B.Ed. students with reference to their Learning Style.

Above hypothesis has been analyzed with the application of mean (M), standard deviation (SD) and Critical Ratio (CR) and the results have been showed in the table no 1.0.

Table No. 1.0.

Comparison of Learning Style of Female and Male distant B.Ed. students

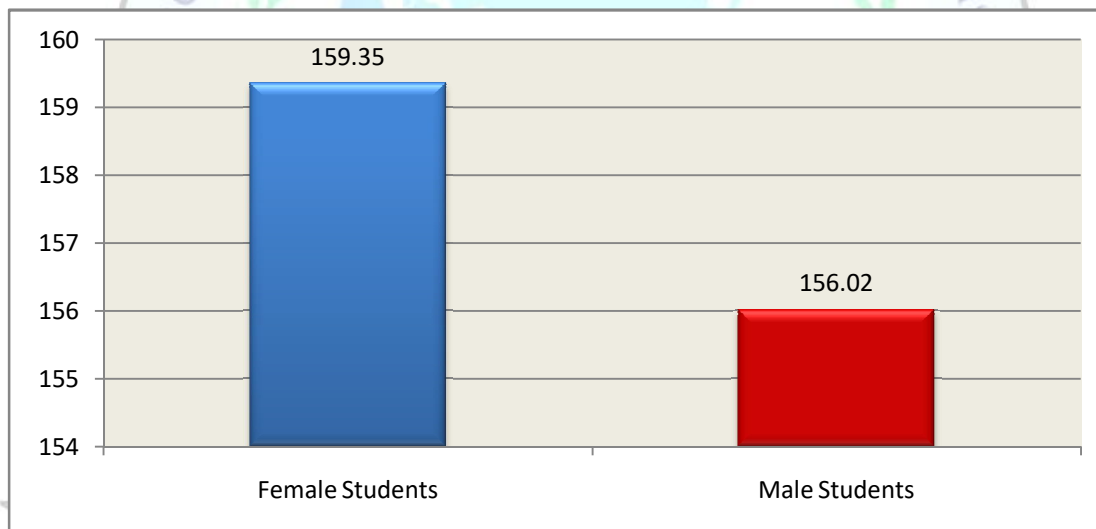
Gender	N	Mean	Std. Deviation	SE _D	CR-Value	Result
Female distant B.Ed. students	170	159.35	13.89	1.62	2.06	Significant*
Male distant B.Ed. students	180	156.02	16.19			

*Significant at 0.05 level

** Significant at 0.01 level

Bar Diagram No. 1.0

Bar Diagram on Mean Scores of Learning Style of Female and Male distant B.Ed. students



It means that there exists statistically significant difference between Female and Male distant B.Ed. students with reference to their Learning Style. The Mean score Female distant B.Ed. students show higher Learning Style in comparison to Male distant B.Ed. students. Hence, the hypothesis **H₀₁** has not been accepted.

2.0. To achieve this objective of the study the following null hypotheses were formulated and tested statistically:-

H₀₂: There is no significant difference between Female and Male distant B.Ed. students with reference to their Enactive Reproducing (ER) dimension of Learning Style.

- Ho₃:** There is no significant difference between Female and Male distant B.Ed. students with reference to their Enactive Constructive (EC) dimension of Learning Style.
- Ho₄:** There is no significant difference between Female and Male distant B.Ed. students with reference to their Figural Reproducing (FR) dimension of Learning Style.
- Ho₅:** There is no significant difference between Female and Male distant B.Ed. students with reference to their Figural Constructive (FC) dimension of Learning Style.
- Ho₆:** There is no significant difference between Female and Male distant B.Ed. students with reference to their Verbal Reproducing (VR) dimension of Learning Style.
- Ho₇:** There is no significant difference between Female and Male distant B.Ed. students with reference to their Verbal Constructive (VC) dimension of Learning Style.

As regard to the various dimensions of Learning Style, the related hypothesis **Ho₂** to **Ho₇** have been tested with the help of Mean, Standard Deviation and Critical Ratio and the results have been presented combined in the table no. 2.0.

Table No. 2.0
Comparison of the all the dimensions of Learning Style of Female and Male distant B.Ed. students

Dimension	Gender	N	Mean	SD	SE _D	CR-Value	Result
ER	Female distant B.Ed. students	170	26.43	3.42	0.38	3.57	Significant**
	Male distant B.Ed. students	180	25.08	3.65			
EC	Female distant B.Ed. students	170	26.41	3.96	0.43	2.02	Significant*
	Male distant B.Ed. students	180	27.28	4.13			
FR	Female distant B.Ed. students	170	25.41	3.62	0.41	3.06	Significant**
	Male distant B.Ed. students	180	24.16	4.01			
FC	Female distant B.Ed. students	170	25.96	4.18	0.46	2.07	Significant*
	Male distant B.Ed. students	180	26.88	4.17			

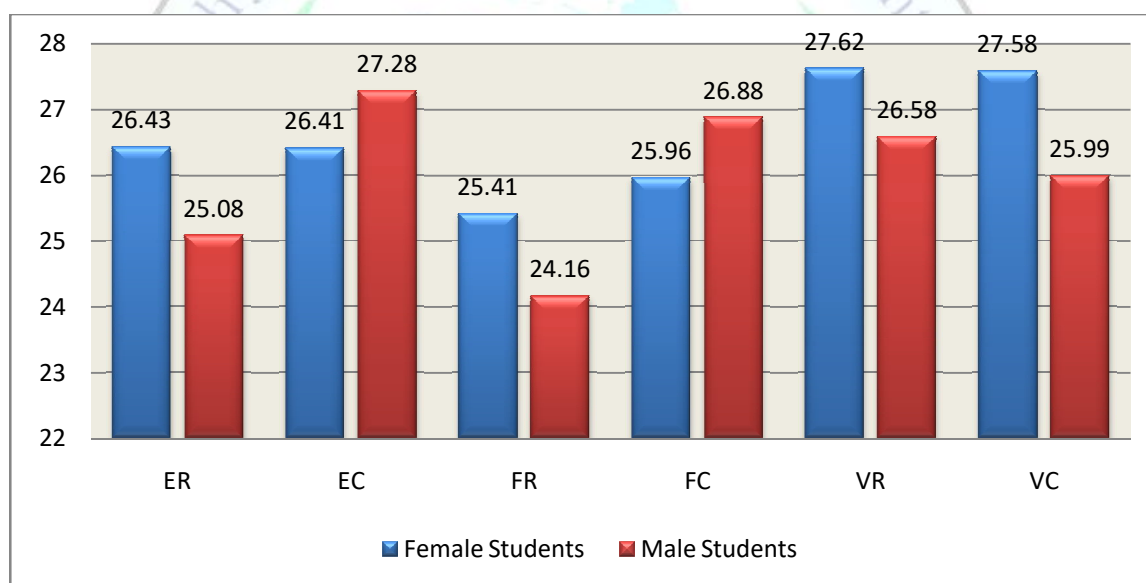
	students						
VR	Female distant B.Ed. students	170	27.62	3.10	0.36	2.85	Significant**
	Male distant B.Ed. students	180	26.58	3.66			
VC	Female distant B.Ed. students	170	27.58	3.44	0.40	3.92	Significant**
	Male distant B.Ed. students	180	25.99	4.05			

*Significant at 0.05 level

** Significant at 0.01 level

Bar Diagram No. 2.0

Bar Diagram on Mean Scores of all the dimensions of Learning Style of Female and Male distant B.Ed. students



The above table and bar diagram no. 2.0 shows the statistics of the comparison of Mean scores of all dimensions of Learning Style of Female and Male distant B.Ed. students. Table no. 2.0 represents the comparison between Female and Male distant B.Ed. students in Enactive Reproducing (ER) Learning Style, the mean score and SD of Female distant B.Ed. students are 26.43 & 3.42 and those of Male distant B.Ed. students are 25.08 & 3.65 respectively and Standard error difference 0.38. The calculated 'CR' value is 3.57, which is significant at 0.01 level of significance with df of 348.

It means that there exists statistically significant difference between Female and Male distant B.Ed. students with reference to their Enactive Reproducing (ER) dimension of Learning Style. The mean scores of Female distant B.Ed. students show higher Enactive Responding (ER) Learning Style

to that of their Male counterparts. Hence, the hypothesis H_{02} has not been accepted.

On the comparison between Female and Male distant B.Ed. students in Enactive Constructive (EC) dimensions of Learning Style, the Mean score and SD of Female distant B.Ed. students are 26.41 & 3.96 and those of Male distant B.Ed. students are 27.28 & 4.13 respectively and Standard error difference is 0.43. The calculated 'CR' value is 2.02, which is significant at 0.05 level of significance with df of 348.

It means that there exists statistically significant difference between Female and Male distant B.Ed. students with reference to their Enactive Constructive (EC) dimension of Learning Style. The Mean scores of Male distant B.Ed. students show higher Enactive Constructive (EC) Learning Style in comparison to Female distant B.Ed. students. Hence, the hypothesis H_{03} has not been accepted.

While comparing on Female and Male distant B.Ed. students in Figural Reproducing (FR) dimensions of Learning Style, the Mean score and SD of Female distant B.Ed. students are 25.41 & 3.62 and those of Male distant B.Ed. students are 24.16 & 4.01 respectively and Standard error difference is 0.41. The calculated 'CR' value is 3.06, which is significant at 0.01 level of significance with df of 348.

It means that there exists statistically significant difference between Female and Male distant B.Ed. students with reference to their Figural Responding (FR) dimension of Learning Style. The Mean score of Female distant B.Ed. students shows higher Figural Reproducing (FR) Learning Style to that of their Male counterparts. Hence, the hypothesis H_{04} has not been accepted.

With regard to Figural Constructive (FC) dimensions of Learning Style, the Mean score and SD of Female distant B.Ed. students are 25.96 & 4.18 and those of Male distant B.Ed. students are 26.88 & 4.17 respectively and Standard error difference is 0.46. The calculated 'CR' value is 2.07, which is significant at 0.05 level of significance with df of 348.

It means that there exists statistically significant difference between Female and Male distant B.Ed. students with reference to their Figural Constructive (FC) dimension of Learning Style. The mean scores of Male distant B.Ed. students show higher Figural Constructive (FC) Learning Style in comparison to those of Female distant B.Ed. students. Hence, the hypothesis H_{05} has not been accepted.

With respect to Verbal Reproducing (VR) dimensions of Learning Style, the Mean score and SD of Female distant B.Ed. students are 27.62 & 3.10 and the Mean score and SD of Male distant B.Ed. students are 26.58 & 3.66, respectively and Standard error difference is 0.36. The calculated 'CR' value is 2.85 which are significant at 0.01 level of significance with df of 348.

It means that there exists statistically significant difference between Female and Male distant B.Ed. students with reference to their Verbal Reproducing (VR) dimension of Learning Style. The Mean scores of Female distant B.Ed. students show higher Verbal Reproducing (VR) in comparison

to Male distant B.Ed. students. Hence, the hypothesis **H₀₆** has not been accepted.

The comparison of Mean score 27.58 and SD 3.44 of Female distant B.Ed. students with Mean score 25.99 and SD 4.05 of Male distant B.Ed. students on Verbal Constructive (VC) dimensions of Learning Style and Standard error difference is 0.40. The produced 'CR' value of 3.92, which is not significant at 0.01 level of significance with df of 348.

It means that there exists statistically significant difference between Female and Male distant B.Ed. students with reference to their Verbal Constructive (VC) dimension of Learning Style. The Mean scores of Female distant B.Ed. show higher Verbal Constructive (VC) Learning Style in comparison to Male distant B.Ed. students. Hence, the hypothesis **H₀₇** has not been accepted.

CONCLUSION:

It has been concluded that after exploring the preferences of learning styles can be said that there was a statistically significant difference between Female and Male distant B.Ed. students with reference to their Learning Style. Based on this finding of the present study, it can be concluded that students' Learning Styles are influenced by gender factor. It may be because of Outcomes revealed that Female distant B.Ed. students showed higher Learning Style in its dimensions viz. Enactive Reproducing, Figural Reproducing, Verbal Reproducing and Verbal Constructive in comparison to Male distant B.Ed. students. It probably may be due to Females generally tended to be reproduction oriented with action based practices and experiences of subject matter (i.e. Enactive Reproducing Learning Style), applied more elaborative processing like diagram, chart, maps etc. for practice of subject matter with which they inclined to relate private or individual links with the study information being instructed (i.e. Figural reproducing Learning Style). Moreover, from the revelation, It can be deduced that Female Students learn better by note making and reading it many times (i.e. Verbal Reproducing Learning Style), focus on mental image of subject matter for leading to conceptualize that are being straight forward connected with their verbal efforts in learning (i.e. Verbal Constructive Learning Style). Additionally explorations of the result presented that Male distant B.Ed. students showed higher Learning Style in its dimensions of Learning Style viz. Enactive Constructive and Figural Constructive. It may be because Males are likely to assign their successful intake of information by doing, touching and experiencing in addition to working with physical action for abstract thought about subject matter (i.e. Enactive Constructive Learning Style). Furthermore, Males tend to be more focused on visually interactions and reflections of experiences about subject matter (i.e. Figural Constructive Learning Style). This result is consistent with Agarwal, S. & Suraksha (2017) who described that Male students showed significant preference Towards figural and constructive learning styles while female students prefer verbal and reproducing learning styles. Kibasan, J. II A., & Singson, E. C. (2016) revealed that female Libyan students majorly were visual students (i. e. similar to figural learning style) and followed by kinesthetic (i.e.

similar to enactive learning style) while male Libyan students most are kinesthetic students (i.e. similar to enactive learning style) and then by visual (i. e. similar to figural learning style).It is recommended that exploring learners' learning style must be taking into consideration and the instructors must address the learning styles of the learners to have better all over results in their academic.

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