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Student teachers' Involvement in Curriculum Design, Implementation and Evaluation of Teacher Education Programmes of Open Universities

Abstract of The Paper

SUB THEME-B-1

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Teacher Education programmes (TEP) through ODL mode is considered as an integral part of higher education in India. An active participation of student teachers in learning and encouraging them to construct knowledge by integrating contextual experiences with structured knowledge system in their own workplaces is encouraged through ODL Mode. Learners autonomy in knowledge generation process is recognized by making optimum use of open learning opportunities. The components like curriculum design, curriculum transaction, learner support services and evaluation process may influence learners involvement in instructional system. Student teachers involvement indicates the relevance and quality of ODL system. The contextual framework of gender, locale and discipline may influence student teachers involvement in instructional system having interaction with different ODL components. The major objectives of this study were (i) To study the effect of ODL components on learners involvement in instructional system in the context of demographic variables; gender, locale and discipline. (ii) To study the effect of interaction of ODL mode components with gender, locale and discipline on learners involvement in instructional system. The population of the study covered ODL mode B.Ed. student teachers enrolled in U.P. region of IGNOU and UPRTOU. 400 sample respondents of IGNOU (UP region) and (UPRTOU) were included in the study. ODL mode student teachers involvement scale was used for data collection. Data converted into standard (z) scores were analysed by using 2x4 factorial design (ANOVA) followed by t-tests. The study revealed high level of involvement of students in curriculum transaction, assessment and evaluation process irrespective of demographic factors; lowest involvement in curriculum design and moderate in LSS respectively, indicating centralizations of ODL mode. Significant interaction effect of locale and ODL components on learners involvement was observed. Student teachers involvement must be more wider in ODL Mode TEP.

Term used: curriculum design, Student Teachers Involvement, teacher education programme.

INTRODUCTION: Open Distance Learning (ODL) mode connotes to promotion of openness in learning through distance education. Distance education incorporates multiple educational opportunities for distance learners through learner friendly course materials, media and technology based delivery facilities, ICT based interactive learning opportunities, learner support services and continuous evaluation process. Such provisions emphasise on learners

self initiated participation in their learning and development. The open universities adopt alternative strategies to promote open learning of diversified groups of learners. ODL system is based on humanistic philosophy of education by insisting on holistic development of human being through liberal and democratic approach. The supremacy of learners is recognized in teaching learning process. Student teachers involvement in educational decision making is ensured through open learning resources and learner support system. Democratic and pluralistic values are interlinked with educational practices by enhancement of learner friendly approaches (Yadav & Lakshmi, (2003)). In such system learning is considered as experiential in nature where learners engage themselves in gaining learning experiences through individual and group efforts. The interpersonal relationships are also promoted for development of academic concepts, life skills and human values. Learner autonomy is promoted in deciding 'What' is to be learnt, 'How' learning will take place, 'Where' learning will occur, 'Who' will assist them for learning, with 'Whom' they will interact for enrichment of learning experiences, 'Which' experiences are valuable and meaningful for them, 'Whether' learning experiences have lead to their development and 'Where' to move after completion of studies. Open learning system encourages student teachers involvement in different stages of education in curriculum design, curriculum transaction process, learner support system and evaluation processes. Learner participation is encouraged in social cultural context to develop meaningful experiences related to different walks of life. The 'constructivist' perspective of learning is encouraged by facilitating different learning opportunities for independent inquiry as well as co-operative and collaborative experiences. Hence, open distance learning mode makes its presence for promoting democratization of education in contrast to traditional conservative mode of education.

Teacher education programme (TEP) is to be understood as provision of participatory learning opportunities for experienced distance teacher learners by which professional knowledge, values and skills can be developed in their own workplaces. The student teachers autonomy is valued in choosing meaningful individual and group learning experiences from alternative learning resources available through open universities. The experienced student teachers make use of open learning course wares for gaining professional knowledge developing skills and attitudes suiting to their socio-cultural ethos of school system in general and classroom teaching situations in specific. Such features of open learning system have been highlighted by Lewis(1986), where learners take own responsibility of choosing the content matter, methods of learning, learning support sources and assessment of own progress in studies according their own expectations. Open learning system's responsibility is also viewed in empowerment of student teachers to recognize their own potentials and capabilities and to manage their own learning and development through ODL mode. Thorpe and Grugeon (1987) had also thrown light on openness closeness continuum in educational institutions in the context of learner's autonomy. They identified different areas of learners autonomy in the context of deciding the curriculum inputs, entrance system, course contents, methods and approaches of learning, study situation, pace of studies, mechanism of assessment, feedback and course end evaluation, etc. Such contributions to the literature of open learning paved the way for making distance education more learner friendly in contrast to the industrialized framework of distance education programme. Sahoo (1994) had highlighted the characteristics of open learning system of Indian universities in the context of learners participation in teaching learning system of distance institutions of India. Researches were conducted to explore

openness of Indian system of distance education in the context of learners autonomy in educational practices. The Indian system of Distance Education, since its inception, had promoted teacher education programmes for working teachers at schools located in far-flung areas of the country. Since, the school curriculum has been redesigned (NCERT, 2005) to promote constructive learning opportunities, teacher education strategies must be geared to need such requirements. Accordingly National Council of Teacher Education, developed curriculum framework for teacher education giving emphasis on hands on experience based professional development (NCTE, 2009). Open distance learning based teacher education must prove its worth by incorporating experiential learning based strategies for teacher's preparation in their own workplaces.

RATIONALE OF THE STUDY:

There have been researches in the area of ODL mode teacher education in India like Management of different forms distance education at higher education stage (Patil,1996); Future expansion and instructional system of distance education at higher education stage (Patri, 1996); Process of B.Ed. programmes in open universities, (Kumar,2011); Students learning style and instructional inputs in teacher education programme of IGNOU (Sahoo&Chandra, 2014); Comparative study of teacher education programme through open distance learning mode in Thailand and India (Seebal, 2017); Learning style and processes of development of professional skills among Students of professional courses of open universities, (Chandra, 2018); Academic motivation and academic problems among minority students studying in general and professional streams, (Taufiq, 2018); Involvement of stakeholders in decision making in B.Ed. programmes in university system, (Prasad, 2019). Openness in open university system and dual mode system have been studied by (Patil 1996 & Patri, 1996). They explored learners autonomy to moderate level in open universities. Prasad (2019) had found learners having lower decision making than their teacher counterparts on curriculum design and entrance matters, where as learners autonomy were found higher in Instructional process and assessment and evaluation. So far, the contextual variables affecting learners involvement in instructional system of teacher education through ODL mode have not been explored in the Indian studies. The extent to which student teachers involvement is encouraged in teaching learning processes of open universities in India will exhibit its relevance and meaningfulness in the education system.

In the Indian context, researches have explored moderate level openness of distance education programmes offered by open universities as well as dual mode universities. Student teachers involvement in open learning process can be understood well in the contextual framework. The socio-cultural factors like gender and locale may have influence on student teachers involvement level in instructional system. Similarly, their discipline orientation like science and arts streams may affect their participation pattern in open learning system. Besides contextual variables, the ODL components, like curriculum design, curriculum transaction, learner support services and evaluation system may influence student teachers involvement in instructional system. The contextual variables and the ODL componenets may have interaction effect on student teachers involvement, since participation in individual learning activities and group experience processes are linked with the nature of instructional system and contextual factors in interactive form. On the basis of such rationale the present study has been conducted by the researchers with following objectives.

OBJECTIVES OF THE STUDY:

- (i) To study the differences in student teachers involvement in instructional system of teacher education programme (TEP) in relation to demographic variables: gender, locale and discipline.
- (ii) To study the differences in student teachers involvement in instructional system of TEP in the context of ODL components.
- (iii) To study the interactive effect of gender and ODL components on student teachers involvement in instructional system of TEP.
- (iv) To study the interactive effect of locale and ODL components on student teachers involvement in instructional system of TEP.
- (v) To study the interactive effect of discipline and ODL components on student teachers involvement in instructional system of TEP.

HYPOTHESES OF THE STUDY: The following null hypotheses were formulated in the context of objectives of the study.

Null Hypotheses: (1)

- 1.1 There is no significant effect of gender on student teachers involvement in instructional system of TEP.
- 1.2 There is no significant effect of ODL components on student teachers involvement in instructional system of TEP.
- 1.3 There is no significant interactive effect of gender and ODL components on student teachers involvement in instructional system of TEP.

Null Hypotheses: (2)

- 2.1 There is no significant effect of locale on student teachers involvement in instructional system of TEP.
- 2.2 There is no significant effect of ODL components on student teachers involvement in instructional system of TEP.
- 2.3 There is no significant interactive effect of locale and ODL components on student teachers involvement in instructional system of TEP.

Null Hypotheses: (3)

- 3.1 There is no significant effect of discipline on student teachers involvement in Instructional system of TEP.
- 3.2 There is no significant effect of ODL components on student teachers involvement in instructional system of TEP.
- 3.3 There is no significant interactive effect of discipline and ODL components on student teachers involvement in instructional system of TEP.

Operational Definition of the terms used in the Study:

- i. **Student teachers involvement** in instructional system means self initiated engagement of learners in instructional system of ODL mode as incorporated in the student teachers involvement scale developed by the authors.
- ii. **ODL mode components** means Curriculum design (CD), Curriculum transaction (CT), Learner support services (LSS) and Assessment & Evaluation (A&E).
- iii. **Gender** classification is delimited to Men and Women.
- iv. **Locale** means Urban and Rural area residence of student teachers.
- v. **Discipline** means Arts and Science stream opted by the student teachers at graduation level.

METHODS AND PROCEDURES OF THE STUDY:

Ex post Facto research design was used in this study. Population of the study covered all the ODL mode B.Ed. student teachers enrolled at study centers of IGNOU and UPRTOU located in the state of Uttar Pradesh (UP) India. The sample covered 400 student teachers (200 each from IGNOU and UPRTOU) enrolled in the study centers at four places of eastern, central and western U.P., India. The ODL mode student teacher involvement scale was developed by the researchers for collection of data. The tool covered 40 items on four dimensions of open learning system viz; Curriculum design (CD); Curriculum Transaction (CT); Learner Support Service (LSS) and Assessment and Evaluation (A&E). The content validity of the tool was established on the basis of judgment of the experts of ODL mode system from different universities of India. The items with correlation values .30 to 1 with total scores were included in the tool. The split half reliability co-efficient of items was calculated as 0.97. Each item of the tool was scored on a three point scale; maximum involvement:3; average involvement :2; and negligible:1. The raw scores obtained by each respondent on student teachers involvement scale were converted to standard scores, z with mean= 50 and SD= 10. The 2×4 ANOVA and 't' tests were used to test the null hypotheses of the study.

ANALYSIS AND INTERPRETATION OF DATA: Analysis and interpretation of data have been presented in the following objective wise.

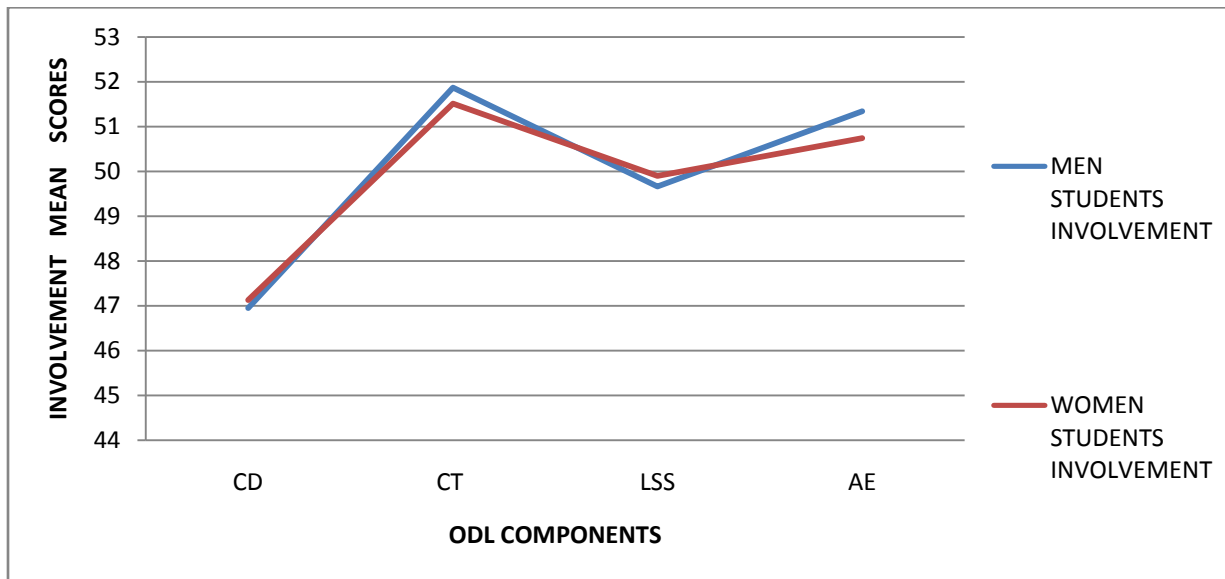
Table-1

Summary of 2×4 ANOVA on effect of gender and ODL mode components on student teachers involvement in instructional system.

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Gender	7.14	1	7.14	0.40	0.52	3.85
ODL mode Components	5077.94	3	1692.65	95.84	5.01	2.61
Interaction	49.96	3	16.65	0.94	0.42	2.61
Within	28115.50	1592	17.66			
Total	33250.54	1599				

Figure-1

Interactive effect of gender and ODL components on student teachers involvement in instructional system.



From **Table-1** it can be observed that the calculated ‘F’ value on effect of gender on student teachers involvement in instructional system was 0.40, which was not significant at 0.05 level of significance. In the case of effect of ODL components on student teachers involvement in instructional system the ‘F’ value was found 95.84, which was found to be significant at 0.01 level of significance. However, in the case of interactive effect of gender and ODL components on student teachers involvement in instructional system the ‘F’ value was found 0.94, which was not significant at 0.05 level. Hence, it can be concluded that the null hypothesis of no significant effect of gender on student teachers involvement in instructional system was not rejected. However, the null hypothesis of no significant effect of ODL components on student teachers involvement in instructional system was rejected at 0.01 level of

significance. It means, there was significant effect of ODL components on student teachers involvement in instructional system. This can, also, be concluded that there was no interaction effect of gender and ODL components on student teachers involvement in instructional system (see **Figure-1**). This is indicative of the fact that effects of gender and ODL components are independent of each other to explain student teachers involvement in instructional system. It may be stated that ODL components affect student teachers involvement in instructional system irrespective of gender of student teachers.

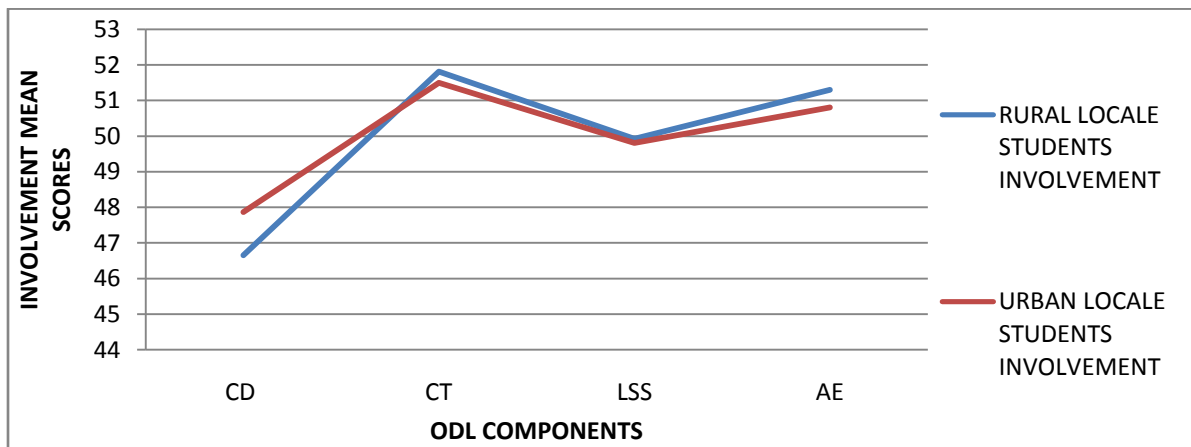
Table-2

Summary of 2×4 ANOVA on effect of locale and ODL mode components on student teachers involvement in instructional system.

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Locale	2.46	1	2.46	0.16	0.69	3.85
ODL mode components	4551.38	3	1517	100.62	1.20	2.61
Interaction	181.07	3	60.36	4.00	0.007	2.61
Within	24003.04	1592	15.08			
Total	28737.95	1599				

Figure -2

Interactive effect of locale and ODL components on student teachers involvement in instructional system.



From **Table-2** it can be observed that the calculated 'F' value on effect of locale on student teachers involvement in instructional system was found 0.16 which was not significant at 0.05 level of significance. In the case of effect of ODL components on student teachers involvement in instructional system the 'F' value was found 100.62, which was found to be significant at 0.01 level of significance. However, in the case of interactive effect of locale and ODL components on student teachers involvement in instructional system the 'F' value was found 4.0, which was significant at 0.01 level. This can be concluded that there was significant interactive effect of locale and ODL components on student teachers involvement in instructional system (see **Figure-2**). This shows that locale and ODL components are dependent upon each other to explain student teachers involvement in instructional system.

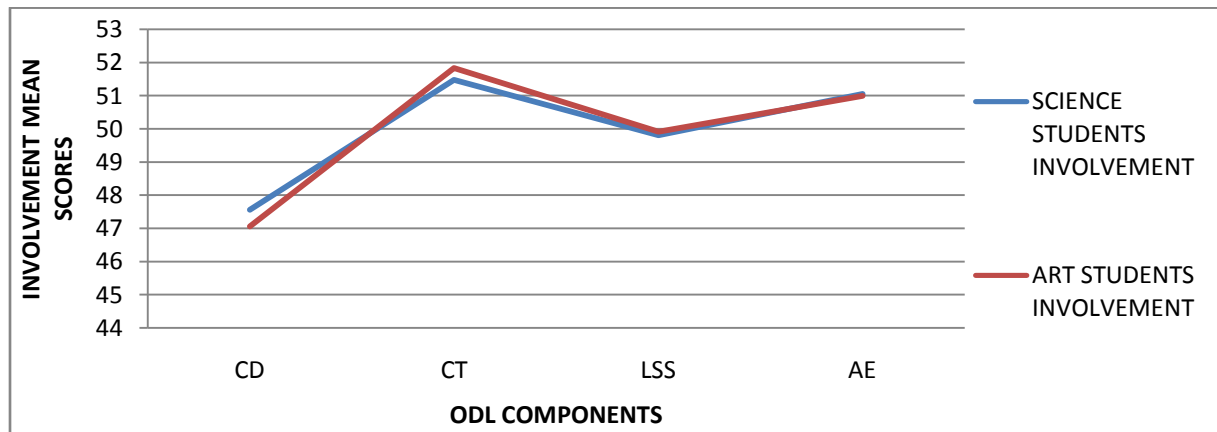
Table-3

Summary of 2×4 ANOVA on effect of discipline and ODL mode components on student teachers involvement instructional system.

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Discipline	0.21	1	0.21	0.013	0.91	3.85
ODL mode Components	4414.62	3	1471.54	97.88	3.84	2.61
Interaction	39.36	3	13.12	0.87	0.45	2.61
Within	23935.23	1592	15.03			
Total	28389.42	1599				

Figure-3

Interactive effect of discipline and ODL components on student teachers involvement in instructional system.



From **Table-3** it can be observed that the calculated ‘F’ value on effect of discipline on student teachers involvement in instructional system was found 0.01 which was not significant at 0.05 level of significance. In the case of effect of ODL components on student teachers involvement in instructional system the ‘F’ value was found 97.88, which was found to be significant at 0.01 level of significance. However, in the case of interactive effect of discipline and ODL components on learners involvement in instructional system the ‘F’ value was found 0.87, which was not significant at 0.05 level. Hence, it can be concluded that the null hypothesis of no significant effect of discipline on student teachers involvement in instructional system was not rejected. However, the null hypothesis of no significant effect of ODL components on student teachers involvement in instructional system was rejected at 0.01 level of significance. It means, there was significant effect of ODL components on student teachers involvement in instructional system. This can be also concluded that there was no significant interaction effect of discipline and ODL components on student teachers involvement in instructional system. This is indicative of the fact that effects of discipline and ODL components are independent of each other to explain student teachers involvement in instructional system (see **Figure-3**). It may be stated that ODL components affect student teachers involvement in instructional system irrespective of discipline of student teachers.

Post Hoc ‘t’ Test:

In order to determine significance of difference in the mean involvement scores corresponding to different pair of groups of ODL components (CD-CT, CD-LSS, CD-AE, CT-LSS, CT-AE and LSS-AE); the post hoc analysis was performed by applying ‘t’ test. The results have been presented in Table-4.

Table-4

Post hoc ‘t’ test on student teachers involvement mean difference on ODL components in different pairs.

	M1 (CD) 46.95	M2 (CT) 51.86	M3 (LSS) 49.65	M4 (AE) 51.33
M1 (CD) 46.95	-	4.90	2.70	4.38
M2 (CT) 51.86	-	-	2.21	0.53
M3 (LSS) 49.65	-	-	-	1.68
M4(AE) 51.33	-	-	-	-

The Post hoc test of mean differences by use of ‘t’ was adopted to determine critical mean difference between different pairs of ODL components (Aggarwal, 2013). The ‘t’ values were calculated with the help of MSw from ANOVA summary Table.1. the ‘t’ values to be significant differences of mean scores pair were calculated by multiplying SED with 2.58 for 0.01 level and 1.96 for 0.05 respectively. The table of mean differences of student teacher involvement scores ODL components wise revealed that all the mean differences, other than student teachers involvement with regard to CT and AE are larger than the critical mean difference 1.09 value at 0.01 level. It can be observed from Table 4 that the mean scores of student teachers involvement with regard to CT (51.81) was found higher than the mean scores of ODL components CD(46.65), LSS(49.92) and A &E (51.30) respectively.

This difference revealed students highest involvement in curriculum transaction over student teachers involvement in two ODL components viz; CD and LSS, where as, there was no significant difference in student teachers involvement with regard to CT and A & E. In other words, it can be said that the student teachers involvement level with regard CT and A & E were of high order. It can be noticed from Table-4 that student teachers involvement in LSS, (49.92) was higher than the first component of ODL viz; CD (46.65) where as it lower than the 4th component of ODL A&E (51.30). The involvement level in A&E (51.30) was also found higher than the first component of instruction, CD(46.65). The test of differences of mean scores of student teachers involvement in TEP componentwise revealed the order of preferences, as, (i) CT (51.50), (ii) A&E (51.30), (iii) LSS(49.92) and (iv) CD(46.65). These findings revealed that curriculum transaction and assessment and evaluation promote higher level of student teachers involvement, where as, student teacher involvement with regard to curriculum design was found negligible. Their involvement in instructional system regard LSS was found to be of moderate nature.

CONCLUSION: The findings revealed that curriculum design part did not ensure involvement of learners, thereby indicating centralized system. The student teachers involvement have not been valued to develop learner friendly curriculum by taking into consideration their problems in school situation, professional needs and priorities. Moreover, learner support services, which are supposed to be of learner friendly nature have not been valued properly by ODL system. They appear to be of structured nature. The dominance of regional directors and programme co-ordinators over management of learner support activities are clearly visible in ODL system. Student teachers moderate involvement indicates lesser openness of learner support system. Special attention of the open universities is sought to make it context specific and problem oriented in nature. The learner support system must incorporate flexibility and encourage learners involvement in solving problems in decentralized form. The results are found to be encouraging with regard to learner's involvement in curriculum transaction process and assessment and evaluation process. There is scope for promoting more learner specific activities with the provision of ICT based learning and collaborative efforts for learning and development in teacher's workplaces. Appropriate networking and monitoring of curriculum transaction and evaluation practices must be encouraged in TEP of open universities. This will lead to establish credentials of TEP of ODL system.

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