**Detailed analysis of results**

The results of the research were two dimensional – development of products in the form of online platform for e-learning, online faculty profile system and training manual for e-learning, as well as pilot trials of the impact of e-learning platform. The same have been presented herein under:

A. Product Development

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B. Outcomes of Field Trials

Pilot study was carried out with students from the disciplines of speech and hearing, and special education at the levels of post-graduation and under-graduation, respectively.

The field trial of the former group involved trial demonstration of online classes on Moodle platform utilising facilities such as video conferencing over Big Blue Button application \*. The trial session involved 60 students taught by one faculty over a duration of one hour. The session was coordinated and observed by the Principal Investigator. Suggestions for further improvisations and troubleshooting were noted down.

The second field trial was detailed experiment involving 13 students of a bachelors course in special education taught in the first semester of the two-year programme. The students were taught in the conventional method during the first half of the course and over the Moodle platform in the concluding half of the course. Both the phases of instruction extended over a duration of eight-weeks each covering two units of content of core course of the B.Ed.Spl.Ed. (HI) programme. The instructional efficiency in terms of student performance in the two modes of instruction were compared. Students’ perceived satisfaction about the integrated learning management system were compiled.

To commence with the empirical data sets in the form of students’ performance scores were subjected to test for normality. As both the pre and post-intervention scores were found to be normally distributed, parametric statistical measures such as t-test for paired samples for measuring variances and Pearson product-moment correlation for determining correlation were made use of.

The first section of results pertains to quantitative, empirical data derived from comparative analysis of influence of Moodle Learning Platform on learning outcomes arrived at the following results:

i.  The academic performances evinced 12% advancement in the scores from the first stage of conventional instruction (77%) following facilitating learning with Moodle learning management (89%). Following subjection to statistical measure of t-test for paired samples, the advantage was also found to be statistically significant (t = 3.22; p < 0.001).

ii. The ongoing supplementation of learning through Moodle platform also seemed to sustain a credible and consistent learning pattern among the students with strong trends of correlation between formative and summative performances (r = 0.98; p < 0.001).

The second section of results presents qualitative insights into student-teacher disposition about Moodle learning experience:

From teacher’s perspective the Moodle platform was advantageous in –

a.  Making learning and reference materials available to students.

b.  Timely conduct of ongoing assessment with immediate feedback.

c.  Diversifying assignments according to varied ability level and interests of students.

d. Providing extended scope for application of learning outside classroom.

e. Conservation of active instructional time, while also facilitating supplementary time for learning outside bounds of class.

Students exhibited a mixed perspective as gathered from their responses to the questionnaire –

a.  In the context of instructional transaction, the major advantage (89%) was the access to comprehensive learning material and individualised learning exposure enabled with the aid of Moodle platform.

b. However moderate affirmation (50%) of the interest created and increase in workload indicates need for further exploration of diverse prospects multimedia forays that effectively engage the learner without taxing them.

c. Students’ satisfaction on evaluation is also not optimal with only 58% assent for prompt and confidential assessment. The reasons being spelt out that assessment accessed out of bounds of classroom permitted misconduct on part of students. Future measures have to be directed to make assessment processes fool and tamper-proof.

d. Students were appreciative (79%) of the student-centred features facilitating anytime anywhere learning as well as the possibility for making up for missed classes.

e. They also highly commended (94%) the extended access to additional information resources and variety of teaching-learning material.

f. This pilot trial did not seem to stimulate sufficient interaction with teacher and among students outside the classroom bounds as implied by the lukewarm responses (38%).

g. Deficient technical expertise in students or under provided technological facilities were not deterrents in this experiments with Moodle as 83% of the students were satisfactorily provided with both.

h.  Considerable numbers of students (58%) opined that Moodle could best supplement conventional classroom instruction rather than substitute, especially because of its impersonal nature.

i.  Through their descriptive remarks students had recommended for fool-proofing assessment exercises, include more active assignments in the form of projects, and provision of printed handouts for students who do not have 24X7 access to ICT facilities.