**REPORT OF PROJECT PILOT STUDY IN SPECIAL EDUCATION ACADEMIC PROGRAMME**

**I.**            **Introduction**

1.       Tertiary education after secondary schooling and intermediate transition is a higher realm of education that expects learners to not just to accrue knowledge, acquire skills or absorb values, but enter into a self-stimulated and motivated, progressive process of learning to learn, and appropriating the learning for useful purposes. And e-learning (OECD, 2005; Keller, & Cernerud, 2002) endeavours to use information and communication technology to broaden the scope and advance the range of purpose in higher education. Moodle is a all-inclusive open source learning management system that provides a versatile platform for enrolling, instructing, evaluating learners, as well as in accumulating and analysing data related to the learning process (Costello, 2013; Jordan, 2013). With AIISH, a pioneering and proactive institute in the field of communication disorders adopts several e-learning ventures to enhance the quality and quantity of human resources generated. In this context, it became essential to explore and evolve the probabilities and prospects involved in adopting moodle as means of blended learning in the human resource programmes at AIISH.

2.       As a preliminary measure of the ARF project to development a custom-made e-learning platform for use in the human resource development programmes at the institute, a pilot study on trial basis was undertaken. This trial effort focused on two major HRD disciplines at the institute–speech and hearing, and special education, and at two key levels of higher education– under graduate and post-graduate.

3.       This report concerns the trial instruction over Moodle platform carried out in the discipline of special education for the hard-core theory course on ‘Introduction of Cerebral Palsy, Locomotor and Multiple Disabilities’ imparted in the first semester of the B.Ed.Spl.Ed. (HI) programme.

**II.**            **Objectives**

1.       Carry out a trial instruction with Moodle, in order to –

i.         Identify viable means for effective transaction knowledge to students.

ii.       Ascertain objective, ail-safe methods for carrying out evaluation.

iii.     Discern channels for extended learning activities

iv.     Recognise technical hitches and procedural snags in using Moodle for instruction and trouble-shooting possibilities.

v.       Devise a an workable prototype for blended(synchronous and asynchronous) instruction.

**III.**            **Participants**

1.       Participants were selected through purposive sampling to include 13 students of first-year B.Ed.Spl.Ed. (HI) students in the first semester of the programme.

2.       All student-participants including 11 females and 2 males were young adults in the age range of 20 to 35 years.

3.       All 13 came with a minimum prior qualification of graduation, and six of them graduated in science subjects while seven in humanities.

**IV.**            **Tools and Materials**

1.       Three major means were employed for data collection

i.         Pre and post intervention of performance scores of the students in the form of component one and component two marks of the credit-based system.

ii.       Proforma for collecting student feedback on the Moodle experience of learning, which in turn involved –

a.       A 20-item questionnaire drawing information –

-       About the facilitation of effective instructional transaction and augmentation (5 items), active student-engagement (2 items), efficient evaluation (2 items), extended learning resources (3 items), learning networks (2 items), student convenience (4 items), as well as prerequisites to employ Moodle (2 items).

-       Through items drew binary responses of ‘yes’ or ‘no’.

-       In case of 12 statements related to the positive attributes of Moodle the ‘yes’ responses were awarded a score of ‘1’ while the ‘no’ responses were awarded a score of ‘0’. Whereas in eight other statements dealing with the adverse outcomes of the experience the scoring was vice-versa.

b.       The second part of the questionnaire comprised of three open-ended queries to draw qualitative feedback from the participants – on the merits, demerits and recommendations for further improvements.

2.       Instructional materials prepared for blended instruction in the course of investigation included –

i.         The first unit of lesson presented through Moodle was in the form of illustrated web-page content with annexed assessment, hyperlink to further learning resources and ongoing, objective assessment as well as descriptive assignments for embedding the learning.

ii.       The second unit of presentation took form of a slide show, again accompanied with assessment, resource and extended assignments.

iii.     These materials were intended to provide supplementary learning exposure besides conventional classroom teaching.

**V.**            **Research Design and Process**

1.       A simple pre and post-test experimental research design had been adopted for the investigation.

i.         A pure or true experimental design with a control group had not been attempted as the experiment involved real time instruction. Because denying the control group of students from a constructive learning experience through Moodle platform may not be ethically reasonable.

ii.       Instead a factorial design where the exposed to conventional learning in the first part of the semester in component-one and then with the assistance of Moodle learning management system in the second part of component-two with comparable instructional content and learning tasks.

iii.     The effect of the independent variable of Moodle learning experience on the dependent outcomes of learning performance and student disposition were investigated by comparing the learning outcomes in the component-one and two.

2.       The pilot study undertook the following course:

i.         Choice of the special educational theory course for experimentation.

ii.       Preparation of learning content.

iii.     Laying out the scheme and schedule and ongoing evaluation of learning outcomes.

iv.     Drafting proforma for recording learning outcomes as well as student feedback.

v.       Implementation two units of the course in the first-half of the semester for eight weeks in the conventional mode without Moodle interface.

vi.     Consequent execution further two units in the second-half of the semester for another eight weeks with the assistance of Moodle interface.

vii.   Compilation and analysis of data to decide influence on teacher-student dispositions and learning outcomes.

**VI.** **Data Analysis and Results**

1.       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.

2.       Influence of Moodle Learning Platform on Learning Outcomes:

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).

3.       Student-Teacher Disposition about Moodle Learning Experience:

i.         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.

ii.       From students’ perspective as gathered from their responses to the questionnaire –

a.       From the perspective 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.

**VII.**            **References:**

OECD (2005). *E-learning in tertiary education*. Available at [http://www.cumex.org](http://www.cumex.org/). (Accessed 27 /02/ 2014).

Keller, C. & Cernerud, L. (2002). Students’ perception of e-learning in university education. *Learning*, *Media and Technology*, 27(1), 55-67.

Jordan, S. (2013). E-assessment: Past, present and future. *New Directions,* *9*(1), 87–106. doi:10.11120/ndir.2013.00009.

Costello, E. (2013). Opening up to open source: Looking at how Moodle was adopted in higher education. *Open Learning: The Journal of Open, Distance and E-Learning*, *28*(3), 187–200. doi:10.1080/02680513.2013.856289