

# Online Mentoring Platform.

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## ABSTRACT –

**In an idea-commercialization support platform, online mentoring is given for idea incubation. An online mentoring platform is used to allow mentors and mentees to connect without having any corporeal limitations. To have a successful mentoring program, appropriate mentor-mentee matching is decisive. To increase the mentor-mentee corresponding tolls, the study matches the keywords mined from mentee ideas with derivative from the ideas on which a mentor provides mentoring. After approximating mentor-mentee experiences with the frequency of mentoring succeeded or failed, a mentor with a high level of experience is matched with a mentee. After a successful completion of a mentor mentee session the mentor as well as the mentee will be able to investigate the performance of the mentee in the complete session. The given system will be able to increase the success rate of mentoring by improving the mentor-mentee matching process and shorten the period until mentoring is actually provided with the help of machine learning.**

**Keywords: Ideacommercialization; Incubation; Corporeal limitations, Machine Learning, Support Platform, Mentor-mentee, corresponding tolls.**

## I. INTRODUCTION

Blended learning, also called hybrid learning or mixed method learning involves both face-to-face classroom style instruction as well as the use of online methods. Researchers are unanimous in stating that the blended learning strategy enables educational institutions to implement a more learner-centered approach to teaching where learners are given space and flexibility to indulge with effective learning activities. To implement blended learning, a web-enabled tool or learning management system (LMS) is often utilized to design a particular course in asynchronous mode. Moodle, a free opensource software package used by educators to create online courses. It provides a modular design that makes it easy to add contents that will engage learners and supports a social constructionist pedagogy style of teaching. The use of Moodle has been cited by several literatures as an effective tool for teacher course administrative tasks improving student inquiry and critical analysis skills inducing self-directed learning as well as promoting collaborative activities. However, even with many cited benefits of using Moodle particularly in higher education institutions, there are still factors that need to be looked upon to ensure its effective implementation. One of the most difficult factors has to do with assessing how the utilization of the various features of Moodle within the online

environment affects the overall course performance of students. Are there patterns of utilization that can lead to better success in learning and higher course grade? This aspect can be analyzed by looking into the sort of activities that students often engage with. Due to the nature of the design of Moodle, it is able to routinely collect detailed activity data on students through its log files. Unfortunately, because of the inherent difficulties in handling these enormous log data files generated online by students; teachers would not agree to analyze them manually. Traditional assessment techniques, on the other hand, do not provide appropriate measures on the kind of skills that students develop while interacting with the features of the Moodle environment.

In the last few years, data mining technologies have been making a lot of headway in capturing and analyzing massive amounts of data. These technologies utilized techniques adopted from machine learning and text mining have enabled researchers to gain unique insights from huge amount of data with minimal effort.

## II. LITERATURE REVIEW

- Rosalina Rebusas Estacio and Rodolfo Callanta Raga Jr College of Computer Studies and Engineering, Jose Rizal University, Mandaluyong City, Philippines.  
This paper describes the learning behavior of a student which can be extracted from the action logs recorded by Moodle. In this paper vector space model is used to aggregate the action logs of students and visualizations of student's level of activity which is generated by using single numeric value. The investigation in this paper indicates that there is a lot of variability between action logs of students and the single numeric value which is quantified from the action logs of student. [21]

- Automated Mentor Assignment in Blended Learning

Environments by Chris Boesch and Kevin Steppe School of Information Systems, Singapore Management University.

In this paper Sing Path, a web-based tool is used to practice programming in several software languages for users. Online feedback on solutions to programming problems can be provided through this platform. Addition of automatic assignment of mentors during class lab is discussed. [2]

- Online Mentoring Programs by GARY A. BERG / SEPTEMBER 2009.

This paper carried out online mentoring through a web-based portal which reduced the which also in turn helped the platform to remove the barrier of the corporeal limitations. It laid a foundation for future platform by making mentoring more available to the isolated masses. [7]

- Ganlin Wang, Hongchun Yuan and Chen Su, "Status and measures for promoting Web-based teaching in IT courses in higher education," 2014 9th International Conference on Computer Science & Education.

This paper reveals the obstructions in the process of online teaching achievement. In this paper the author uses a resource aggregation method to build a higher-level open source network teaching platform which is based on existing university. The intellectual and teaching resources are aggregated to reduce the pressure on teachers who are working individually on the online instructions. [6]

- Mining activity grades to model students' performance by David de la Peña, Juan A. Lara, David Lizcano, María A. Martínez (in alph. order) Escuela de Ciencias Técnicas e Ingeniería Madrid Open University, MOU Madrid, Spain.

E-learning systems have major advantages however additionally create major challenges.

One of these is the way to do an honest job of tutoring students while not face-to-face contact. This calls for the interpretation of large quantities of data generated as a result of the activities performed by students, which e-learning platforms collect and store. These data are also potentially very useful for preventing

student dropout. We propose the use of knowledge discovery techniques to analyse historical student course grade data in order to be able to predict in real time whether or not a student will drop out of a course in the future. Logistic regression models are used for the purpose of classification. Experiments conducted with data on over 100 students for several real distance learning courses confirm the predictive power of our proposal that outperforms other existing approaches in terms of accuracy. [22]

- Students' grading control and visualization in competence-based learning approach by Kadri Umbleja Department of Computer Control Tallinn University of Technology Tallinn, Estonia

This paper analyses however students familiarize themselves and address novel competence-based approach to learning in online e-learning atmosphere wherever the main focus is on personal learning. Learners have freedom to mark their own path through the courses while not deadlines by selecting themselves what, once and the way a lot of they learn. That methodology concentrates on mensuration what an individual will truly do as a result of learning. so as to possess that sort of elaborate image of everyone's skills, completely different reasonably approach for assessment was developed exploitation automatic algorithms that mimic student's responsive method with tiny repeatable exercises. [20]

## PROPOSED SYSTEM

- This platform basically depicts the working space of the mentor as well as the mentee.
- In this workspace the interaction between these entities take place in the form of information exchange through various activities arranged by the mentor in order to enhance the mentees performance.
- After the selection of the mentor from the recommended list in the previous step, the user gets to select from three types of training modes to choose from viz. Beginner, Moderate, Advanced. Of which each mode has its own duration of time and a given level of difficulty.

- According to the choice of the mentee the time slot and the duration of the mentoring course is set for

the mentee.

- The mentee is given certain test's in the form of activities or mcq's.
- The score is then evaluated and the corresponding analysis is reported back to both the mentor as well as the mentee.

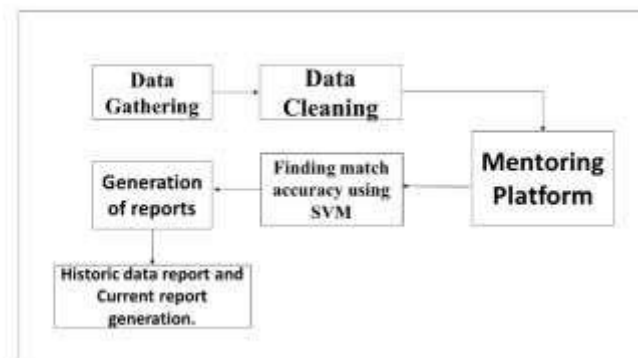


Figure 1: System Architecture Diagram

## III. MODULES

The proposed system contains six main modules, listed as below:

### ► Data Gathering

- The data gathered in this module will be that of the mentor as well as the mentee.
- This information will include the mentor's field of specification and the mentees required field,
- This data will help the system to match the suitable mentor to the mentee.

### ► Data Cleansing

- This module will clear out the unwanted data.
- This module makes sure that only the important data is forwarded ahead,

### ► Mentoring Platform

- This module will be the part in which the mentor-mentee interaction will take place.

- This platform will enable the users to be a part of the courses as well as the performance measurement trails.
- Finding accuracy using SVM, generation of Reports and historic and current data representation.
- In this module the accuracy of the mentor mentee matching will be mapped and they will be able to see their matching accuracy.

#### ► Generation of Reports

- This module will help the users visualize the results of their attempted tests.
- This helps the users to visualize their results without taking any extra efforts for just reading the generated results.

#### ► Current and Historic data representation

- This module will give a comparative insight of the user's progress before joining the program as well as the improvement made after joining the program.

## IV. FUTURE SCOPE

- The system can be upgraded to be used as a pooling platform of several mentors as well as mentees on a national level.
- The system can be used to reach out and help improve the level of knowledge in the less urban parts, or the parts where the reach of physical mentors is less or not available.
- The system can be converted into a cross platform application for more extended use by the masses.
- The system can try to bridge the gap between the mentors and the mentees by using various features like voice as well as video calling.

## V. CONCLUSION

Mentoring is the process of information exchange or passing the said knowledge ahead to the next person who intends to receive it.

The exchange of information between humans is an important factor which helps in the achievement of increasing literacy throughout the intended userbase. The system intends to simplify the current active systems work so that the said learner can focus more on the knowledge that the said learner wants according to the changing market needs, and not that of the limited options provided.

## VI. REFERENCES

- [1] Bloom, B. (1984). "The 2 Sigma Problem: The Search for Methods of Group Instruction as Effective as Oneto-One Tutoring", *Educational Researcher*, 13:6(416).
- [2] Boesch, C., & Steppe, K. Case Study on Using a Programming Practice Tool for Evaluating University Applicants. 3rd Annual International Conference on Computer Science Education: Innovation and Technology. 2011.
- [3] Boesch, C., & Boesch S. (2012). Tournament-based Teaching. 4th Annual International Conference on Computer Science Education: Innovation and Technology. 2012.
- [4] Boesch, C., & Boesch, S. (2013). Adaptive Gameplay for Programming Practice. 5th Annual International Conference on Computer Science Education: Innovation and Technology (CSEIT 2013).
- [5] Keller, F. S. (1968). Goodbye teacher... *Journal of Applied Behavior Analysis* 1, 79-89.
- [6] Ganlin Wang, Hongchun Yuan and Chen Su, "Status and measures for promoting Web-based teaching in IT courses in higher education," 2014 9th International Conference on Computer Science & Education.
- [7] Online Mentoring Programs BY GARY A. BERG / SEPTEMBER 2009
- [8] Chris BOESCH & Kevin STEPPE, Automated Mentor Assignment in Blended Learning Environments, *Software Engineering Education and Training (CSEE&T)*, 2014 IEEE 27th Conference, Pages (1-5).

- [9] Agnihotri, L., International Journal of Research in Science advanced Technology and management studies (IJRSTMS) Aghababayan, A., Mojarad, S., Riedesel, M. and Essa, A. (2015), "Mining login data for actionable student insight", International Educational Data Mining Society, pp.472474. ISSN: 2459-425X • Website: [www.ijrstms.com](http://www.ijrstms.com)
- [10] Alonso, F., López, G., Manrique, D. and Viñes, J.M. (2005), "An instructional model for web-based elearning education with a blended learning process approach", British Journal of Educational Technology, Vol. 36 No. 2, pp. 217-235.
- [11] Ateia, H. and Hamtini, T. (2016), "Designing and implementing of dynamic technique for detecting learning style using literature-based approach", International Journal of Database Theory and Application, Vol. 9 No. 6, pp. 9-20, available at: [www.sersc.org/journals/IJDTA/vol9\\_no6/2.pdf](http://www.sersc.org/journals/IJDTA/vol9_no6/2.pdf) (accessed January 2, 2017). Blended Learning Definitions (2017), "Clayton Christensen Institute", available at: [www.christenseninstitute.org/blendedlearning-definitions-and-models/](http://www.christenseninstitute.org/blendedlearning-definitions-and-models/) (accessed March 15, 2017).
- [12] Blikstein, P. (2011), "Using learning analytics to assess students' behavior in open-ended programming tasks", Proceedings of the 1st International Conference on Learning Analytics and Knowledge, ACM, Alberta, pp. 110-116, available at: <http://dl.acm.org/citation.cfm?id=2090132> (accessed April 12, 2017)
- [13] I. Baumgartner and V. Shankararaman, "Actively linking learning outcomes and competencies to course design and delivery: experiences from an undergraduate Information Systems program in Singapore," Proceedings of Global Engineering Education Conference EDUCON2013 (Mar 13-15, 2013, Berlin, Germany), IEEE, 2013.
- [14] D. Zehetmeier, M. Kuhrmann, A. Bottcher, K. Schlierkamp, and V. Thurner. "SelfAssessment of Freshmen Students' Base Competencies," Proceedings of Global Engineering Education Conference EDUCON2014 (Apr 3-5, 2014, Istanbul, Turkey), IEEE, 2014.
- [15] M. Jaanus, "The Interactive Learning Environment for Mobile Laboratories," Tallinn Univeristy of Technology Press, Tallinn, 2011, ch.4, sec. 3, pp 59.
- [16] Pardos, Z., Heffernan, N., Anderson, B. & Heffernan, C. The effect of model granularity on student performance prediction using Bayesian networks. Proc. Int. Conf. User Model., Corfu, Greece, pp. 435–439, 2007.
- [17] Ritter, S., Harris, T., Nixon, T., Dickison, D., Murray, R. & Towle, B. Reducing the knowledge tracing space. Proc. Int. Conf. Educ. Data Mining, Cordoba, Spain, pp. 151–160, 2009.
- [18] Chen, C., Chen, M. & Li, Y. Mining key formative assessment rules based on learner portfiles for webbased learning systems. Proc. IEEE Int. Conf. Adv. Learn. Technol., Niigata, Japan, pp. 1–5, 2007.
- [19] Yang, T. D., Lin, T. & Wu, K. An agent-based recommender system for lesson plan sequencing. Proc. Int. Conf. Adv. Learning Technol., Kazan, Russia, pp. 14–20, 2008.
- [20] Students' grading control and visualization in competence-based learning approach by Kadri Umbleja Department of Computer Control Tallinn University of Technology Tallinn, Estonia
- [21] Rosalina Rebuscas Estacio, Rodolfo Callanta Raga Jr, (2017) "Analyzing students online learning behavior in blended courses using Moodle", Asian Association of Open Universities Journal, Vol. 12 Issue: 1, pp.52-68
- [22] Mining activity grades to model students' performance by David de la Peña, Juan A. Lara, David Lizcano, María A. Martínez (in alph. order) Escuela de Ciencias Técnicas e Ingeniería Madrid Open University, MOU Madrid, Spain.