

ABSTRACT

Zulham, 2021. *Development of Problem Investigate Based Learning Model in Data Mining Subject.*

Education is one of the pillars of human and national development. Human development studies have made learning like a meaningful aspect in realizing civilization in the country. Therefore, the Indonesian government makes learning as one of the necessities for all citizens, which is stated in the 1945 Constitution in article 31 paragraph 1 if each State community has the right to receive teaching, and article 31 paragraph 3 which also confirms that the Government makes efforts as well as organizing a national learning system that enhances faith and piety and noble morals in order to educate the nation's life.

In addition, with technological advances that are currently entering the era of the industrial revolution 4.0, the world of education must maximize qualified knowledge so that it can compete in the industrial world. That way researchers seek to find problems faced for the advancement of the world of education, especially in the Data Mining course which is considered to be most related to the development of Information Technology today. Currently, students have not received a harmonious understanding in developing and implementing their knowledge so that students are less creative.

Sourced from the problems mentioned above, the researchers looked for the right solution to develop science, especially in the Data Mining course. By developing 2 types of learning models, namely Problem Based Learning and Investigation Group, it is hoped that it can improve students' thinking and creative skills so that educational outcomes can be obtained. From the results of the development carried out using the ADDIE Model Research and Development (R & D). From the development results, it was found that the Problem Investigate Based Learning (PIBL) Development Model was used to learn data mining subjects and produce new syntax, namely, Meet and understand the problem, Planning investigation, Carrying out investigation, Gather and share the information, Evaluating achievement, Determine the best fit of solutions. The test results of the development model carried out showed a significant increase in student learning outcomes from the control class and the experimental class. Testing is stated to be practical, valid and effective.

Keywords: *Model Development, Problem Investigate Based Learning, Data Mining.*

ABSTRAK

Zulham, 2021. Pengembangan Model Problem Investigate Based Learning pada Mata Kuliah Data Mining. Disertasi Pascasarjana Fakultas Teknik Universitas Negeri Padang.

Pendidikan ialah salah satu pilar dari pembangunan manusia serta bangsa. Kajian pembangunan manusia sudah menjadikan pembelajaran bagaikan aspek berarti dalam mewujudkan peradaban negeri. Oleh sebab itu, pemerintah Indonesia menjadikan pembelajaran bagaikan salah satu kebutuhan untuk segala warga, yang tertuang dalam Undang- Undang Dasar 1945 pada pasal 31 ayat 1 kalau masing- masing masyarakat Negeri berhak memperoleh pengajaran, dan pasal 31 ayat 3 yang pula menegaskan kalau Pemerintah mengusahakan serta menyelenggarakan sistem pembelajaran nasional yang tingkatkan keimanan serta ketakwaan dan akhlak mulia dalam rangka mencerdaskan kehidupan bangsa.

Disamping itu dengan kemajuan teknologi yang saat ini memasuki era revolusi industri 4.0 dunia pendidikan harus memaksimalkan pengetahuan yang mumpuni sehingga bisa bersaing di dunia industri. Dengan begitu peneliti berupaya mencari permasalahan yang dihadapi untuk kemajuan dunia pendidikan khususnya pada mata kuliah Data Mining yang dianggap paling berhubungan dengan perkembangan Teknologi Informasi masa kini. Saat ini mahasiswa belum mendapatkan pemahaman yang selaras dalam mengembangkan dan mengimplementasikan pengetahuannya sehingga mahasiswa kurang kreatif.

Bersumber dari permasalahan tersebut di atas maka peneliti mencari solusi yang tepat guna mengembangkan ilmu pengetahuan khususnya pada matakuliah Data Mining. Dengan mengembangkan 2 jenis model pembelajaran yaitu *Problem Based Learning* dan *Investigation Group* diharapkan mampu meningkatkan kemampuan berpikir dan kreasi mahasiswa sehingga capaian pendidikan bisa didapatkan. Dari hasil pengembangan yang dilakukan dengan menggunakan *Research and Development* (R & D) model ADDIE. Dari hasil pengembangan ditemukan Model *Pengembangan Problem Investigate Based Learning* (PIBL) yang nantinya dipakai untuk pembelajaran mata kuliah data mining dan menghasilkan sintaks baru yaitu, *Meet and Understand the Problem, Planning investigation, Carrying out Investigation, Gather and Share the Information, Evaluating Achievement, Determine the Best Fit of Solutions*. Hasil pengujian dari model pengembangan yang dilakukan ada peningkatan yang signifikan hasil belajar mahasiswa dari kelas kontrol dan kelas eksperimen. Pengujian dinyatakan praktis, valid dan efektif.

Kata Kunci : Pengembangan Model, *Problem Investigate Based Learning*, Data Mining.