

ABSTRAK

Ayu Miranda : “**Inovasi Virtual Laboratory Terintegrasi Pedagogical Content Knowledge (PCK) Pada Materi Termokimia Kelas XI SMA**”. Tesis. Medan : Program Pascasarjana, Universitas Negeri Medan, 2022.

Inovasi teknologi di bidang pendidikan sangat dibutuhkan dalam proses pembelajaran yang kreatif dan inovatif untuk meningkatkan kualitas sumber daya manusia (SDM). Penelitian ini bertujuan untuk mengembangkan media *virtual laboratory* terintegrasi *pedagogical content knowledge* yang dapat meningkatkan hasil belajar dan motivasi belajar peserta didik serta untuk mengetahui hubungan motivasi dengan hasil belajar peserta didik, dan respon guru serta peserta didik terhadap media. Penelitian ini menggunakan pendekatan *Research and Development (R&D)* dengan menggunakan model pengembangan ADDIE (*Analysis, Design, Development, Implementation, and Evaluation*). Subyek penelitian ini berjumlah 20 siswa kelas XI MA, dengan menggunakan instrumen analisis data berupa tes hasil belajar dan angket, yang dianalisis menggunakan teknik analisis data statistik deskriptif dan statistik inferensial yaitu uji korelasi. Hasil penelitian diperoleh bahwa media *virtual laboratory* terintegrasi *pedagogical content knowledge* hasil pengembangan telah valid (sangat layak) digunakan berdasarkan Badan Standar Nasional Pendidikan (BSNP) dengan perolehan rata-rata keseluruhan sebesar 3.82. Hasil belajar peserta didik setelah menggunakan media *virtual laboratory* terintegrasi *pedagogical content knowledge* telah mencapai kriteria ketuntasan minimal yaitu dengan perolehan nilai sebesar 87.65 dan media dapat memotivasi belajar peserta didik dengan perolehan nilai rata-rata motivasi sebesar 85.02%. Hubungan motivasi dan hasil belajar memiliki hubungan yang positif dan signifikan dengan perolehan koefisien korelasi sebesar 0.630 dan nilai signifikansi sebesar 0.000 serta respon guru dan peserta didik terhadap penggunaan media sangat baik dengan nilai rata-rata persentasi respon guru sebesar 96.4% dan peserta didik sebesar 88.58%.

Kata Kunci : *Virtual Laboratory, Pedagogical Content Knowledge, Research and Development (R&D), Motivasi.*



ABSTRACT

Ayu Miranda : "Innovation of Virtual Laboratory Integrated Pedagogical Content Knowledge (PCK) for Class XI High School on Thermochemical Materials “. Thesis. Medan: State University of Medan, Postgraduate Program, 2022.

Technological innovation in the field of education is needed in a creative and innovative learning process to improve the quality of human resources (HR). This study aims to develop knowledge of pedagogic content of integrated virtual laboratory media that can improve student learning outcomes and learning motivation and to determine the relationship between motivation and student learning outcomes, as well as teacher and student responses to the media. This study uses a Research and Development (R&D) approach using the ADDIE development model (Analysis, Design, Development, Implementation, and Evaluation). The sample of this study was 20 students of class XI MA, using data analysis techniques in the form of learning outcomes tests and questionnaires, which were analyzed using descriptive statistical data analysis techniques and inferential statistics, namely correlation tests. The results showed that the virtual laboratory media for integrated pedagogic content knowledge that was developed was valid (very feasible) to be used based on the National Education Standards Agency (BSNP) with an overall average acquisition of 3.82. Student learning outcomes after using virtual laboratory media integrated with pedagogical content knowledge have reached the minimum completeness criteria with a score of 87.65 and the media can motivate student learning with an average motivation score of 85.02%. The relationship between motivation and learning outcomes has a positive and significant relationship with the acquisition of a correlation coefficient of 0.630 and a significance value of 0.000 and the response of teachers and students to the use of media is very good with an average percentage of teachers of 94.4% and students of 88.58%.

Keywords: Virtual Laboratory, Pedagogical Content Knowledge, Research and Development (R&D), Motivation.

