

ABSTRAK

Peningkatan Kemampuan Penalaran Statistis dan *Self-Efficacy* Peserta Didik Melalui *Problem Based Learning*

Penelitian ini bertujuan untuk menguji terdapat tidaknya peningkatan signifikan kemampuan penalaran statistis peserta didik setelah implementasi pembelajaran model *Problem Based learning*; menguji terdapat tidaknya peningkatan signifikan *Self-Efficacy* peserta didik setelah implementasi pembelajaran model *Problem Based learning*; menguji terdapat tidaknya peningkatan signifikan kemampuan penalaran statistis dan *self-efficacy* peserta didik setelah implementasi pembelajaran model *Problem Based learning*; mendeskripsikan kemampuan penalaran statistis peserta didik setelah implementasi pembelajaran model *Problem Based learning*; dan mendeskripsikan *self-efficacy* peserta didik setelah implementasi pembelajaran model *Problem Based Learning*. Metode yang digunakan pada penelitian ini adalah *mixed methods* dengan rancangan *The Explanatory Sequential Design*. Populasi pada penelitian ini adalah peserta didik kelas XII SMA Negeri 1 Lakbok Ciamis Jawa Barat dan dengan teknik *random sampling*, sampelnya adalah peserta didik kelas XII MIPA-4 dengan jumlah 32 orang yang terdiri dari 18 orang peserta didik perempuan dan 14 orang peserta didik laki-laki. Instrumen yang digunakan meliputi tes kemampuan penalaran statistis, angket *self-efficacy*, dan pedoman wawancara. Hasil penelitian menunjukkan bahwa terdapat peningkatan signifikan kemampuan penalaran statistis dan *self-efficacy* peserta didik setelah implementasi pembelajaran model PBL. Berdasarkan hasil perhitungan, diperoleh $z = -4.945$, $p = 0.000$, maka dapat disimpulkan bahwa terdapat peningkatan signifikan kemampuan penalaran statistis peserta didik setelah implementasi pembelajaran model *Problem Based learning*; diperoleh $t(31) = -6.489$, $p = 0.000$, maka terdapat peningkatan signifikan *self-efficacy* peserta didik setelah implementasi pembelajaran model *Problem Based learning*; diperoleh $F = 97.345$, $p = 0.000$, maka terdapat peningkatan signifikan kemampuan penalaran statistis dan *self-efficacy* peserta didik setelah implementasi pembelajaran model *Problem Based learning*. Berdasarkan hasil penelitian, diperoleh adanya perubahan kemampuan yang teramati oleh peneliti diantaranya peserta didik mengalami perubahan yang semula sebagai penerima informasi pasif menjadi pencari solusi aktif. Pemahaman juga berkembang dari sekadar menghitung menjadi memahami makna statistika dalam konteks. Selain itu, juga terdapat perkembangan *self-efficacy* yang meliputi adanya transformasi *self-efficacy* pada peserta didik dengan memperlihatkan adanya kesadaran akan ketidakmampuan sehingga adanya keinginan untuk berubah, ketergantungan pada pengajar sehingga mulai mencoba mandiri, adanya pengalaman sukses kecil terkumpul sehingga timbul keyakinan yang mulai terbentuk, secara bertahap timbul keyakinan pada diri peserta didik.

Kata kunci: Kemampuan Penalaran Statistis, *Problem Based Learning*, *Self-Efficacy*.

ABSTRACT

Improving Students' Statistical Reasoning Skills and Self-Efficacy Through Problem-Based Learning

This study aims to examine whether there is a significant increase in students' statistical reasoning abilities after the implementation of the Problem-Based Learning model; to examine whether there is a significant increase in students' self-efficacy after implementing the Problem-Based Learning model; to examine whether there is a significant increase in students' statistical reasoning abilities and self-efficacy after implementing the Problem-Based Learning model; to describe students' statistical reasoning abilities after implementing the Problem-Based Learning model; and to describe students' self-efficacy after implementing the Problem-Based Learning model. The method used in this study was mixed methods with an explanatory sequential design. The population in this study was grade XII students at SMA Negeri 1 Laksbok Ciamis, West Java, and using random sampling techniques, the sample consisted of 32 grade XII MIPA-4 students, comprising 18 female students and 14 male students. The instruments used included a statistical reasoning ability test, a self-efficacy questionnaire, and interview guidelines. The results of the study showed that there was a significant increase in students' statistical reasoning ability and self-efficacy after the implementation of the PBL learning model. Based on the calculation results, $z = -4.945$, $p = 0.000$, it can be concluded that there is a significant increase in students' statistical reasoning abilities after the implementation of the Problem-Based Learning model; $t(31) = -6.489$, $p = 0.000$, so there is a significant increase in students' self-efficacy after the implementation of the Problem-Based Learning model; $F = 97.345$, $p = 0.000$, so there is a significant increase in students' statistical reasoning ability and self-efficacy after the implementation of the Problem-Based Learning model. Based on the results of the study, there were observable changes in the abilities of the students, including a shift from being passive recipients of information to active seekers of solutions. Their understanding also developed from simply calculating to understanding the meaning of statistics in context. In addition, there was also a development in self-efficacy, which included a transformation in the students' self-efficacy, as evidenced by an awareness of their inability to do something, which led to a desire to change; dependence on the teacher, which led to attempts at independence; and the accumulation of small successes, which led to the formation of confidence, gradually building the students' self-belief.

Keywords: Statistical Reasoning Ability, Problem Based Learning, Self-Efficacy.