

ABSTRAK

Ali Ihsanul Huda. Analisis Kesulitan Mahasiswa Biologi Dalam Mempelajari Kultur Jaringan di Universitas Negeri Medan. *Tesis*, Program Pascasarjana Universitas Negeri Medan. 2017.

Penelitian ini bertujuan untuk mengetahui kesulitan belajar mahasiswa pada materi kultur jaringan di Universitas Negeri Medan dari aspek kognitif berdasarkan Taksonomi Bloom, indikator pembelajaran dan faktor penyebab kesulitan belajar mahasiswa. Jenis penelitian yang digunakan yaitu *field research*. Populasi penelitian ini adalah mahasiswa S1 reguler yang sedang melaksanakan mata kuliah Kultur Jaringan di Program Pendidikan Biologi S1 Universitas Negeri Medan dengan jumlah 228 mahasiswa. Sampel diambil secara *purposive sampling* yaitu tiga kelas dengan jumlah 127 mahasiswa. Teknik pengumpulan data yang digunakan adalah tes hasil belajar mahasiswa pada materi kultur jaringan dan angket kesulitan belajar. Hasil penelitian menunjukkan bahwa persentase kesulitan belajar mahasiswa pada tingkat pengetahuan (C-1) yaitu sebesar 30,42%, tingkat pemahaman (C2) yaitu sebesar 60,02%, tingkat penerapan (C3) sebesar 60,64% , tingkat analisis (C4) sebesar 59,73% ,tingkat evaluasi (C5) sebesar 58,91% , dan tingkat kreasi (C6) sebesar 61,38%. Sedangkan persentase kesulitan-kesulitan belajar mahasiswa dari aspek indikator totipotensi sel (indikator ke-1) sebesar 48,43% , indikator menggambarkan laboratorium kultur jaringan (indikator ke-2) sebesar 69,24%, indikator menuliskan alat-alat yang digunakan pada kultur jaringan (indikator ke-3) sebesar 72,63% , indikator sterilisasi alat dan eksplan (indikator ke-4) sebesar 69,09% , indikator media dan fungsinya (indikator ke-5) sebesar 36,22% , indikator identifikasi media (indikator ke-6) sebesar 47,18% , indikator peranan zat pengatur tumbuh (indikator ke-7) sebesar 67,40% , indikator kriteria eksplan (indikator ke-8) sebesar 35,43% , indikator prosedur sterilisasi eksplan (indikator ke-9) sebesar 52,17%, indikator kaitan kultur sel dengan kalus (indikator ke-10) sebesar 25,20%, indikator keuntungan kultur haploid (indikator ke-11) sebesar 55,12%, indikator langkah-langkah kultur protoplas (indikator ke-12) sebesar 52,95% , indikator alasan dilakukan kultur jaringan (indikator ke-13) sebesar 60,63% , indikator peranan induksi variasi somaklonal (indikator ke-14) sebesar 49,21%, indikator keuntungan metabolit sekunder (indikator ke-15) sebesar 62,40%, indikator pelestarian plasma nutfah (indikator ke-16) sebesar 53,54% di masukkan ke dalam kesulitan sedang, dan pada indikator aklimatisasi (indikator ke-17) sebesar 39,96% . Faktor penyebab kesulitan belajar mahasiswa yang berkontribusi pada materi kultur jaringan yaitu faktor psikologi, minat, motivasi, Metode pengajaran, media pengajaran, sumber/ buku yang digunakan dalam pembelajaran, pengalaman dan pengaruh teman serta peranan orang tua.

Kata Kunci : Kesulitan Belajar, Indikator Pembelajaran, Faktor-faktor yang Mempengaruhi Kesulitan belajar.

ABSTRACT

Ali Ihsanul Huda. Analysis of Biological Difficulties In Studying Tissue Culture at State University of Medan Indonesia. *Thesis*. Graduated Program State University of Medan, Indonesia. 2017.

This study aims to determine students' learning difficulties on tissue culture materials at the State University of Medan from cognitive aspects based on Taxonomy Bloom, learning indicators and factors causing student learning difficulties. The type of research used is field research. The population of this study is Biology's bachelor students degree who are conducting subjects Tissue culture in bachelor degree of Biology Education Program in State University of Medan with total 228 students. Samples are taken by using purposive sampling which are consisting of 3 classes with total 127 students. Technique of collecting data used is test result of student learning on tissue culture and questionnaire of learning difficulties. The results shown the percentage of students' learning difficulties at the level of knowledge (C-1) is 30,42%, the level of understanding (C2) is 60,02%, application level (C3) of 60,64%, level of analysis (C4) is 59,73%, level of evaluation (C5) is 58,91%, and level of creation (C6) is 61,38%. While the percentage of student's learning difficulties from learning indicator aspect totipotency cells in indicator-1st is 48,43%, the 2nd indicator describe the tissue culture laboratory is 69,24%, 3rd indicator write the tools used in tissue culture is 72,63%, 4th indicator sterilization tools and explant is 69,09%, 5th indicator media and the functions is 36,22%, 6th indicator identification media is 47,18%, 7th indicator the role of growth regulators is 67,40%, 8th indicator explanatory criteria is 35,43%, 9th indicator explants sterilization procedure is 52,17%, 10th indicator the link of cell culture with callus is 25,20%, 11th indicator advantages of haploid cultur is 55,12%, 12th indicator protoplast culture steps is 52,95%, 13th indicator the reason for tissue culture is 60,63%, 14th indicator the role of induced somaclonal variation is 49,21%, 15th indicator secondary metabolite benefits is 62,40%, the 16th indicator germplasm conservation is 53,54%, and 17th indicator acclimatization is 39,96%. The causing students' learning difficulties contribution the tissue culture materials ; psychological factors, interests, motivation, teaching methods, teaching media, sources / books used in learning, experience, influence of friends, and role of parents.

Keywords: *Learning Difficulties, Learning Indicators, Factors Influencing Learning Difficulties.*