

Analysing Student's Understanding on Urinary System through Paper Pencil Test and Concept Map

Berliany Nuragnia
International Program on Science Education (IPSE)

ABSTRACT

A descriptive study with correlation design about student's cognitive is carried out to investigate the profile of student's paper pencil test and concept map in learning urinary system and the correlation between student's paper pencil test and concept map as well. A number of eight grade students (n=26) in International school in Bandung was involved as research participants. International school has been known for their students' cognitive ability and their curriculum that support students to be able to integrate their knowledge which related to daily life. The data of student's paper pencil test was obtained using objective and subjective test instrument while student's concept maps were assessed based on Mueller's Classroom Concept Map Rubrics. Research findings shows that most of student's can not solve the problem of applying (C3) question test (42.8%) and the concept of urination process. Generally students were not able to determine the concept and make proportion in making concept map. Student found it difficult to explain the concept of disease in urinary system with their concept map. While there is no significant correlation between student's concept map and paper pencil test (Spearman correlation is 0.252). The low relationship between score test and score of concept map is due to the type of knowledge been assessed through paper pencil test was mostly factual and students' low ability in explaining the concept by making concept map. Thus, type of concept map tasking should be adjust with students' ability.

Keywords: *Concept map, urinary system, type of knowledge, objective test, cognitive domain*

Analysing Student's Understanding on Urinary System through Paper Pencil Test and Concept Map

Berliany Nuragnia
International Program on Science Education (IPSE)

ABSTRAK

Sebuah penelitian deskriptif dengan desain korelasi dilaksanakan untuk meninvestigasi profil dari peta konsep dan tes kertas dan pensil dalam konsep sistem urin. Beberapa (n=26) siswa kelas delapan di salah satu sekolah internasional di Bandung dilibatkan dalam penelitian ini sebagai sampel. Kertas dan pensil tes data dikumpulkan menggunakan objektif dan subjektif test, sedangkan peta konsep dinilai berdasarkan *Mueller's Classroom Concept Map Rubrics* dan peta konsep acuan. Berdasarkan hasil penelitian ditemukan bahwa sebagian besar dari siswa kesulitan dalam menyelesaikan soal pada kognitif level 3 (*applying*) dengan presentase pencapaian hanya 42.8%. Berdasarkan konsep sebagian besar siswa kesulitan untuk menyelesaikan soal mengenai proses urinasi. Sedangkan hasil dari peta konsep siswa menunjukkan bahwa sebagian besar siswa kesulitan untuk menentukan konsep dan menghasilkan proposisi dalam membuat peta konsep. Selain itu siswa juga kesulitan dalam menjelaskan konsep penyakit dalam sistem urin menggunakan peta konsep. Tidak ditemukan korelasi yang signifikan antara peta konsep dan kertas dan pensil tes (*Spearman correlation*= 0.252) disebabkan karena 50% dari soal kertas dan pensil tes adalah *factual knowledge*. Selain itu siswa masih belum dapat menjelaskan pemahaman mereka dalam peta konsep, oleh karena itu jenis dari penugasan peta konsep harus disesuaikan dengan kemampuan siswa.

Berliany Nuragnia, 2015

Analyzing Students' Understanding On Urinary System Through Paper And Pencil Test And Concept Map

Universitas Pendidikan Indonesia | repository.upi.edu | perpustakaan.upi.edu