

Abordagens Pedagógicas no Ensino da Ortóptica e Ciências da Visão na ESTeSL

Pedagogical approaches in the education of
Orthoptics and Vision Sciences at ESTeSL

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Digital strategy in higher education institutions

- Advances in knowledge have resulted in an increasing use of technology for personal and educational purposes.
- Online learning is the delivery of a learning, training or education program by electronic means.
- A range of online learning management system software is available for educators such as Moodle, Blackboard, and Canvas.
- The use of online learning is growing in medical education (Ellaway & Masters, 2008).



Digital strategy IN the BSc Orthoptic degree

- In 2011, online learning activities were introduced in the teaching of the research in orthoptics module for final year undergraduate orthoptic students (4-year program) at ESTeSL.



A research study undertaken at ESTeSL (n=42) from 2012/13, 2013/14 and 2016/17 cohorts showed that the majority of the students used the Moodle platform only to submit and download learning materials.



Low scores were attributed to peer support.

Digital strategy IN the BSc Orthoptic degree

- Moodle platform (since 2011)



The Modular Object-Oriented Dynamic Learning Environment is a free open-source online learning platform.

Examples in the **Research in orthoptic module** (4th year students):

1. **Chat online:** enable students to perform group work whilst on clinical placement in locations across the whole country.
2. **Summative assessment with a multiple choice test on-line:** enable students to learn as they have the possibility to receive immediate feedback.

Digital strategy IN the BSc Orthoptic degree

- **Kahoot (since 2017)**

Is a free game-based learning platform for teachers and learners.

Examples:

1. **Research in orthoptic module** (4th year students): formative peer assessment of research projects at the end of each group presentation followed by discussion, questions and feedback.
2. **Visual impairment and rehabilitation module** (3rd year students): formative assessment with 3 multiple choice questions at the end of each lecture with discussion and feedback.



Digital strategy IN the BSc Orthoptic degree

- **Tutorial lectures (since 2018)**

Digital devices are allowed and can be used.



Examples



1. **Clinical education in Orthoptics and Vision Sciences module (3rd year students):** clinical cases solved using case based learning. **Digital devices** are used to involve the group of learners, by actively encouraging them to do something in order to learn about it.

Digital strategy IN the BSc Orthoptic degree

- At distance meetings using voice + video



Examples:

1. **One to one classes** for internship students or Master program students: those classes often move at a pace decided by the learner and their needs.

Student testimonials

Research in orthoptic module 17/18 (4th year students; n=19)

- At what moment in class were you most engaged as a learner?

Interaction

digital + face-to-face

- “Com a realização do "Kahoot" e do chat online”
- “Nas apresentações dos projetos de investigação e através da utilização do kahoot”

Interaction

face-to-face + hands on

- “Nos exercícios práticos”
- “Nas situações experimentais no decorrer da aula, ou seja, nas questões mais práticas”

Interaction

face-to-face

- “Aulas práticas com SPSS, onde houve mais interação”
- “Aula de pesquisa bibliográfica”
- “Momento de esclarecimento de dúvidas e nas discussões de trabalhos”



Student testimonials

Research in orthoptic module 17/18 (4th year students; n=19)

- **At what moment in class were you most distanced as a learner?**

Learner type 1

Kinesthetic or
hands-on
learners

- “Nas primeiras aulas, com mais teoria”
- “Nas aulas mais iniciais de introdução”
- “Aulas meramente expositivas”
- “Nas aulas em que estive ausente”



Learner type 2

Auditory
learners

- “Não me senti nesse momento”
- “Não houve nenhuma aula que sentisse distância”
- “Não consigo recordar-me de um momento exato, por isso, não deve ter acontecido”
- “Não me senti distante em nenhuma circunstância”



Student testimonials

Research in orthoptic module 17/18 (4th year students; n=19)

- What event surprised you most?

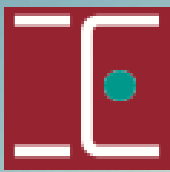
*Digital
event*

- “A utilização do **chat** e do **kahoot** como método de avaliação de apresentações dos projetos”
- “Realização do teste em **suporte informático**”
- “O **chat**, dado que é algo inovador e que permitiu esclarecimento de dúvidas entre todos os grupos. Para além disto, demonstra disponibilidade por parte da professora.”
- “O teste **online**, fazer e sair a nota na hora.”



Conclusions and further work

- Rating the **tutor support higher than peer support** could reflect that the students are still very dependent on the lecturer (Syed-Mohamad, Pardi, Zainal, & Ismail, 2006).
 - More work need to be done, to reinforce student's strategies to work collaboratively with their peers.
- Although e-learning is an effective approach in many medical schools, it should not replace traditional learning (Makhdoom et al., 2013).
 - **Blended learning** is a better approach using a balanced methodology with the advantages of technology and the benefits of face-to-face learning.



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