2.1 Elaboration of learning objectives and ideas

Deliverable: AI4K12



SAINT

HANDS ON INTRODUCTION TO ARTIFICIAL INTELLIGENCE IN PRIMARY EDUCATION USING MINECRAFT

DATE

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REFERENCED DOCUMENTS

ID	Reference	Т	Title
1	2022-1-FR01-KA220-SCH-000087794	S	SAINT Proposal
2			

APPLICABLE DOCUMENTS

ID	Reference	Title
1		
2		

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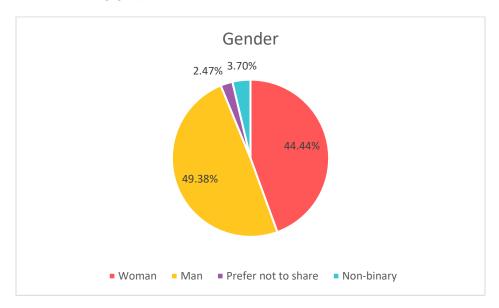
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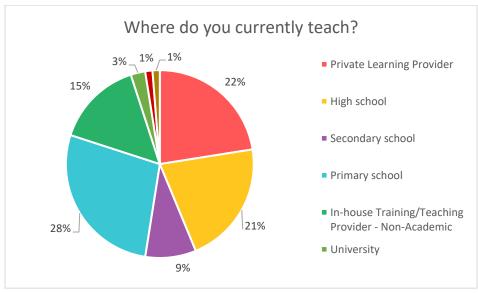


1. Elaboration of learning objectives: Survey Results

1.1 Demographics

We gathered 82 responses from teachers and various educators, whose demographic characteristics are presented in the following graphs.

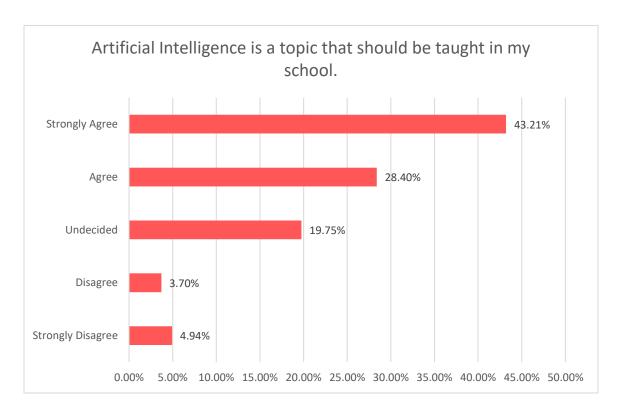




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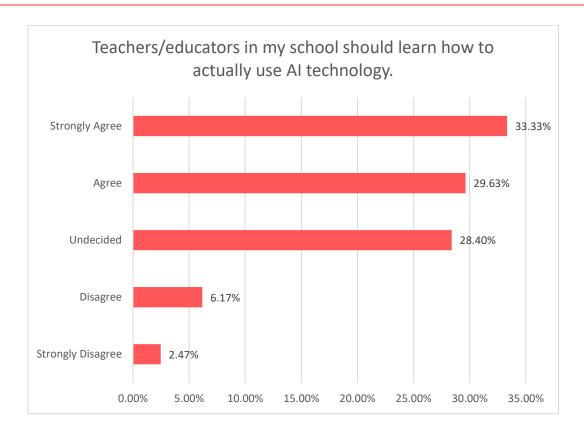
1.2 Part A: Views that educators & teachers have in the field of artificial intelligence.



We observe that the majority of responders (71,61%) support the idea of including artificial intelligence (AI) in the school curriculum. 19,75% have not decided yet, whereas the 8,64% disagree with this proposal.

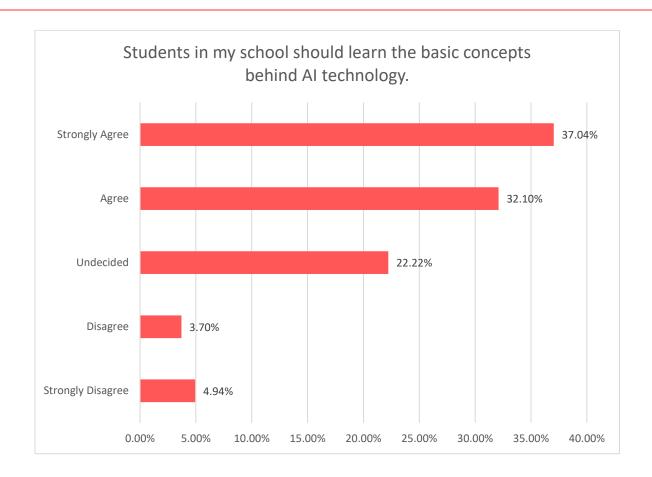


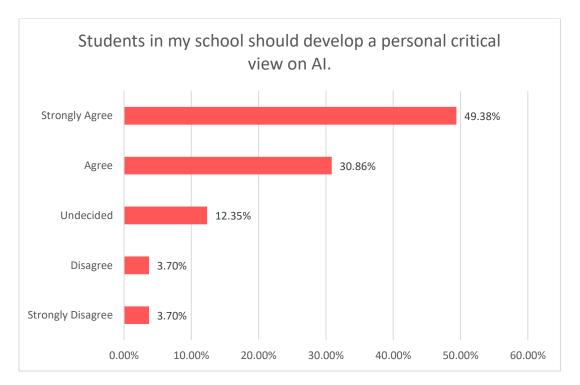




The majority of the responders 62,96% believe that teachers, and educators in general, should be trained in order to use AI technology in the classroom, while 8,64% disagree. The 28, 40% have not decided yet. It seems that the need of teacher's training in order to use AI technology in the classroom, arises from the fact that the majority of the responders (69,14%) agrees to the proposition of teaching basic AI concepts at school. In addition, it is rather interesting how the majority of the teachers (80,24%) believe that students should develop a personal critical view on AI.



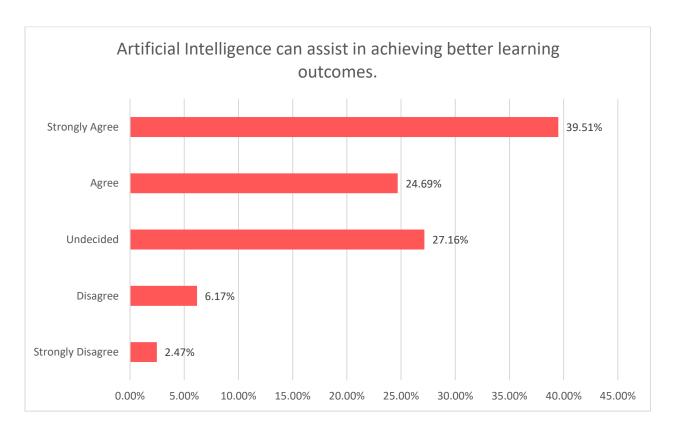




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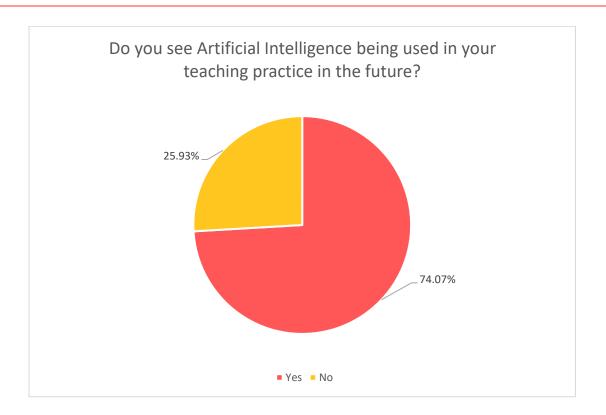






The 74,07% of the responders believe that AI will definitely play a crucial role on the teaching practice in the future, while the 64.2% believes that AI can assist teachers to achieve better learning outcomes.



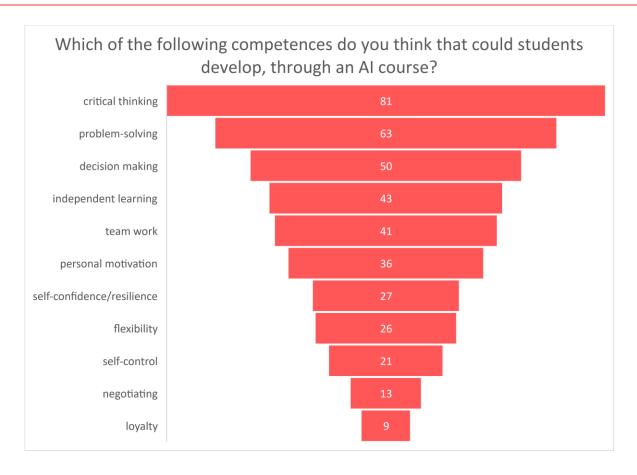


1.3 Part B: Views on competences

In this section of the survey, we tried to investigate the competences and skills that teachers believe as essential to be developed through a AI course; critical thinking, problem solving, decision making, independent learning and team work are the competences that gathered the more responses. In the following graph you can see in more detail all the related competeces along with the number of responses gathered.



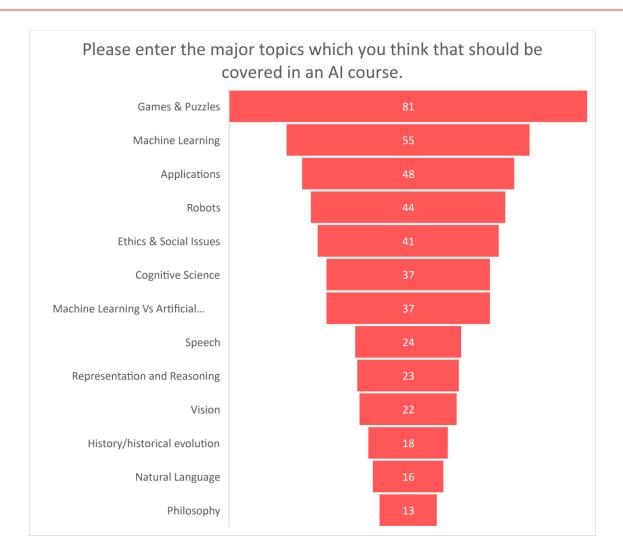




Regarding the major topics that an AI course should cover, responders distinguish – with more than 40 times selected - games & puzzles, machine learning, applications of AI, robots and ethical & social issues.



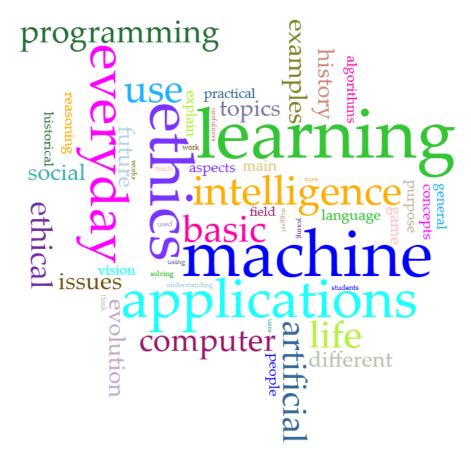




At the first open question (number 11: which AI topics do you think should be covered in an introductory AI course?) the most frequent words used were: learning (15); machine (12); ethics (12); applications (10); everyday (9); life (7); intelligence (7); use (6); basic (6); artificial (6); programming (5); ethical (5); computer (5); topics (4); social (4); issues (4); history (4); future (4); examples (4); evolution (4); different (4); vision (3); reasoning (3); purpose (3); practical (3); people (3); main (3); language (3); historical (3); general (3); game (3); field (3); explain (3); concepts (3); aspects (3); algorithms (3); young (2); works (2); work (2); using (2); uses (2); usefulness (2); used (2); understanding (2); think (2); teach (2); sure (2); suggest (2); students (2); solving (2); society (2); robots (2); recognition (2); real (2); puzzles (2); problem (2); principles (2); planning (2); ones (2)

In the following infographic are presented the most used words. Along with the observed correlations, we can argue that topics related to ethics, machine learning as well as applied AI in everyday life should be dominant in an introductory AI course.





For the second open question (number 12: *Please list the primary goals/outcomes for an AI course.*) the most frequent words used were:

understanding (29); basic (14); students (9); knowledge (9); critical (9); thinking (8); skills (7); use (6); solving (6); learning (6); concepts (6); systems (5); problem (5); learn (5); know (5); intelligence (5); create (5); better (5); artificial (5); algorithms (5); technology (4); solve (4); recognize (4); problems (4); field (4); application (4); analysis (4); world (3); ways (3); used (3); specific (3); school (3); programming (3); primary (3); people (3); model (3); maybe (3); life (3); help (3); gn (3); future (3); everyday (3); develop (3); cooperation (3); applications (3); young (2); sure (2); subject (2); sound (2); scientific (2); related (2); reasoning (2); real (2); projects (2); principles (2); possibilities (2); needs (2); needs (2);

In the following infographic are presented the most used words. Along with the observed correlations, we can argue that the primary goals of the course should be the understanding of the Al basics, as well as enhancing skills such as critical thinking and problem-solving.







For the third open question (number 13: What is a major obstruction in covering those topics?.) the most frequent words used were: lack (26); knowledge (19); equipment (15); teachers (9); students (8); topics (7); teacherss (7); training (6); time (6); school (6); topicss (5); funding (5); budget (5); skills (4); schools (4); human (4); field (4); curriculum (4); course (4); cost (4); understand (3); technical (3); information (3); funds (3); factor (3); difficult (3); believe (3); ai (3); trainers (2); tools (2); terminator (2); technology (2); teaching (2); teach (2); taught (2); society (2); research (2); replace (2); regarding (2); obstacle (2); necessary (2); movies (2); mentality (2); matters (2); materials (2); major (2); limitations (2); like (2); level (2); know (2); kind (2); interest (2); incorporate (2); high (2); greek (2); generally (2); equipments (2); education (2)

In the following infographic are presented the most used words. Along with the observed correlations, we can argue that teachers' lack of knowledge, lack of training programs as well as equipment constraints are the main obstacles to covering AI topics in schools.





