

Task 6: Review of Related Literature & Studies

March 23 2021

Proposed Topic

Optimal Learning Strategy for Learning Python: A Qualitative Study on the Optimal Learning Strategy for Python Learners.

Literature 1

Author, Title, Year	<ul style="list-style-type: none">• Eva Meszarosova• Is Python an Appropriate Programming Language for Teaching Programming in Secondary Schools?• 2016
Research Problem and Objective/s	Is Python an Appropriate Programming Language for Teaching Programming in Secondary Schools?
Research Design	Survey
Key Findings	Python has many factors that make it a considerable language to learn, such as its readability, its directness, its availability, and many more.
Conclusion	Python may not fulfill the requirements of the teachers, if you compare it to other programming languages, it clearly does better than most of them.
URL Link	https://sciendo.com/article/10.1515/ijicte-2015-0005

Literature 2

Author, Title, Year	<ul style="list-style-type: none">• Authors<ul style="list-style-type: none">◦ Siti Rosminah Derus◦ Ahmad Zamzuri Mohamad Ali• Difficulties in Learning Programming: Views of Students• 2012
Research Problem and Objective/s	<ol style="list-style-type: none">1. To know the level of understanding of different topics of the Fundamental Programming course.2. To investigate the nature of difficulties while learning Fundamental Programming course.3. To get an overview of the situation that would help to learn Fundamental Programming course.4. To investigate the factors that lead to perform poorly in Fundamental Programming course.5. To know the level of agreement if using visualization tools to visualize the program execution will help in learning Fundamental Programming.
Research Design	Survey
Key Findings	Visually learning programming can have a positive impact on a student's learning.

Conclusion	Visualization of the course brings the most out of students' learning.
URL Link	https://d1wqtxts1xzle7.cloudfront.net/31715369/ICCIE2012_siti_rosminah.pdf?1376392309=&response-content-disposition=inline%3B+filename%3DDIFFICULTIES_IN_LEARNING_PROGRAMMING_VIE.pdf&Expires=1616571988&Signature=DRQjvc2YayQbI2NY6OceMZwIyc8-eHBwzSup4UkLpIXjCpsX3jvIoR7Lj7WpZMh-MRQBCChvW9UJuil-DsEzQjpWHicru5~j-7WDqj~rebVwcrTxs9t99ous3eUkiAUtYXYH2pRsGf6sesMzx1KzjavphjV3uvu409Sgy1sqEyo1IVR8D5hHULhPJPSTAMqLm1fykmJpYK4RBwwFdAjJVGr0E8B6jvfaVQNFFLT0ihyQcU0Mmmz82h9jSI8wuJd1xhDX4bew2MJ6dEUw0FBIBJFb4mowno9LYbFrAL2pEdlzCrd~r2DEy6AdZcRtI579lOeyalJIflouT11L0pQbyGw_&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA

Literature 3

Author, Title, Year	<ul style="list-style-type: none"> • Authors <ul style="list-style-type: none"> ◦ John Maltby ◦ Jan Whittle • Learn Programming Online: Student Perceptions and Performance • 2003
Research Problem and Objective/s	To test the effectiveness of online delivery of programming units.
Research Design	Quantitative Paradigm / Questionnaire
Key Findings	Online learning can: <ul style="list-style-type: none"> • be self-paced • be easily referenced • provide direct access (to materials and resources)
Conclusion	High-achievers do well in Online Learning as much as they do in face-to-face, but it is unclear whether or not low-achievers are disadvantaged by the absence of face-to-face tuition.
URL Link	https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.17.331&rep=rep1&type=pdf

Review of Literature & Studies

Python has been the leading & in the top 5 programming language across the tech industry since late 2018, and as it seems, it will continue to exceed that in the future. Add its being free and open source to the list, plus its easily readable syntax, it has been contributing majorly to the software industry. There have been studies and investigations comparing Python to other languages and how it is a faster language to code in, and they have been very relevant to the language's reputation. Thus, teaching it to students as a first programming language and an introduction to programming is an excellent move to make.

In Meszarosova's (2016) study, we can draw out that Python has many factors making it a considerable language to learn and teach to schools, in general. Learning a programming language has its challenges itself as well. Which where visual learning comes in, as visual learning can have a positive impact on a student's learning (Derus, 2012). But with the new normal of online learning, learning programming languages becomes easier and more direct, self-taught or with an online class. Online learning can be self-paced, easily referenced, and provide direct access to study materials and resources (Maltby, 2003).

Learning Python, a visually easy programming language, is at its best time to be learned. Opportunities may come and go, learning Python will still bring relevance in the software industry. Online learning is also very relevant at this time and age, which is a key factor in learning Python.