

## School Vocational Orientation through STEAM

| Table 1 – Summary |                   |   |
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| 1                 | Author(s)         | Dalaka Mersini - Computer Science Teacher -2nd Junior High School of Thebes ( Pindareio) /5nd Junior High School of Thebes (Pelopideio)   |
| 2                 | Background        | I am a teacher of Computer Science in two high schools with a total of 300 students (aged 12-15 years old) and 30 teachers in the area of Thebes,Greece. During the last 15 years I have taught students from 6 years old to 80 years old in schools (primary, secondary schools, high schools) and adult programs in three regions of Greece, I have participated in many seminars and conferences in person and at distance and I have collaborated in programs with teachers from Greece and Europe.   |
| 3                 | Descriptive title | School Counseling through STE(A)M   |
| 4                 | Abstract          | The policy I propose aims at preparing, during the school year, current students aged 12-15 for the future career path. According to the Institute for the Future, it estimates that by 2030, 85% of the jobs that today's 12-year-olds will work in have not yet been invented, and as a result will require a workforce that must be creative and prepared to respond realistically to real world problems. I believe that local and national authorities should offer practical and financial assistance, of any kind, since in the future they will be the country's workforce. |

| Table 2 – Goals |                          |   |
|-----------------|--------------------------|---|
| 1               | General goal             | Knowing that today's 12-year-olds when they enter the labor market, the professions will have diversified and that they must have the knowledge to adapt we will try through this policy to excel the existing professions, to communicate with professionals and also to give them the supplies through the STE (A) M philosophy to be able to adapt to new working conditions.  |
|                 | General goal description | Knowing that the evolving labour market of the future will require a workforce that is creative and prepared to respond innovatively to real-world problems and that STEAM education is defined as an approach to teaching in which students demonstrate innovative and critical thinking and creative problem solving at the intersection of these disciplines and outperform their peers, high levels of learning retention and increased enjoyment of learning, we want through collaborations between teachers, students and professionals and the creation of coursework using this philosophy, students to discover the labor market and develop these opportunities. <ul style="list-style-type: none"> <li>• <a href="https://www.ecs.org/wp-content/uploads/Policy-">https://www.ecs.org/wp-content/uploads/Policy-</a></li> </ul> |

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|---|-----------------|--|
|   |                 | <p><a href="#">Considerations-for-STEAM-Education.pdf</a></p> <ul style="list-style-type: none"> <li>• <a href="https://www.ecs.org/wp-content/uploads/Preparing-Students-for-Learning-Work-and-Life-through-STEAM-Education.pdf">https://www.ecs.org/wp-content/uploads/Preparing-Students-for-Learning-Work-and-Life-through-STEAM-Education.pdf</a></li> <li>• <a href="#">Career counseling strategies - a practical handbook</a></li> <li>• <a href="#">Education Policy Outlook Greece</a></li> <li>• <a href="#">Every Job is a STEAM Job: Why Your Child Will Use Tech in Their Future Career</a></li> </ul> |
| 3 | Strategic goals | <p>We have the following goals for the next school year.</p> <ul style="list-style-type: none"> <li>• During the year students with the help of their teachers through their lessons to develop the STEAM philosophy and create small assignments.</li> <li>• Once a week to discuss different professions and each student to make a presentation of a profession.</li> <li>• Once a month to communicate for two hours either live or remotely with various professionals and career guidance counselors.</li> </ul>   |

**Table 3 – Targets**

|   |               |   |
|---|---------------|---|
| 1 | Beneficiaries | <p>Through STE(A)M in all subjects we want to reach 12-16 years old students. We will help them to discover their skills and focus on their development in order to choose the profession that is most suitable for their profile.</p> <p>Matching career guidance and career preparation through STE (A) M training can adequately address the design career life of individuals in the information society.</p> |
| 2 | Recipients    | <p>Recipients will be first of all our students but from result will be all society, because we will educate the future workforce to respond innovatively to real-world problems.</p>   |
| 3 | Special needs | <p>This policy includes all students physically and mentally healthy or not.</p> <p>As long as they can participate in the school class and be part of it.</p>  |

**Table 4 – Value Proposal**

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|---|----------------|---|
| 1 | Value proposal | <p>Our students to be right and efficient future professionals.</p> |
|---|----------------|---|

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|---|---------|---|
| 2 | Results | <p>Our students will gain exploratory thinking and a greater interest in the learning process.</p> <p>I believe that 70% -80% of students will be able to decide their professional future.</p>   |
| 3 | Impact  | <p>The impact of School Counseling through STE(A)M on students' social and emotional well-being growth, including incentive gains, perseverance, commitment, empathy and emotional regulation. Students learn to adapt their actions in relation to the actions of others - enhancing their self-efficacy and social perceptiveness. unique ability to help students understand new perspectives and participation in social and creating emotional skills.</p> |

| Table 5 – Costs |                       |   |
|-----------------|-----------------------|---|
| 1               | Cost structure        | <ul style="list-style-type: none"> <li>• Labour (internal staff): all teachers (permanent and substitute) will be involved so there will be no flat costs.</li> <li>• External consultants:</li> </ul> <p>Initially the parents of the pupils and then other professionals who will offer their services free of charge or for a small legal fee which will be covered by the partner institutions.</p> <ul style="list-style-type: none"> <li>• Administrative costs: School budget</li> <li>• Financial costs (interest on loans, etc.): None</li> <li>• Travel &amp; Accommodation: None</li> <li>• Rental of premises: None</li> <li>• Furnishing: School infrastructure</li> <li>• Material-Logistics: School Infrastructure and from local and state agency grants.</li> <li>• Miscellaneous services: Forms/copies, etc. from the school budget (city school board) and from local and state agency grants.</li> </ul> |
| 2               | Funding opportunities | <ul style="list-style-type: none"> <li>• We will use volunteers and agencies to provide free advice and cooperation. (e.g. Tipping Point)</li> <li>• Funds can come from school budget expenses, municipal or state grants, and from the PTA.</li> </ul>  |

| Table 6 – Action Plan |  |  |
|-----------------------|--|--|
|-----------------------|--|--|

|   |            |  |
|---|------------|--|
| 1 | Activities | <ul style="list-style-type: none"> <li>• During the year students with the help of their teachers through their lessons to develop the STEAM philosophy and create small assignments.</li> <li>• Once a week to discuss different professions and each student to make a presentation of a profession.</li> <li>• Once a month to communicate for one to two hours either live or remotely with various professionals and career guidance counselors.</li> </ul> |
|---|------------|--|

| Table 7.1 – Risks/Competition |                     |   |
|-------------------------------|---------------------|---|
| 1                             | Risk description    | <p>Due to the pandemic there may be weaknesses for face-to-face lessons and career information labs so there is a need for remote virtual workshops.</p> <p>Delaying the approval of speakers.</p> <p>The lack of an IT specialist who will help the organization.</p> <p>As public schools the lack of material and technical infrastructure that will support the organization's event.</p> <p>Small number of offers, difficult selection, high workload for each member of the group, low quality results</p> |
| 2                             | Probability         | 1-2   |
| 3                             | Severity            | 3   |
| 4                             | Mitigation strategy | Redefining goals and reprogramming with flexibility.  |

| Table 7.2.a – Risks/Opposition |                     |  |
|--------------------------------|---------------------|--|
| 1                              | Risk description    | <ul style="list-style-type: none"> <li>• Teachers to refuse to cooperate</li> </ul>  |
| 2                              | Probability         | 1  |
| 3                              | Severity            | 2  |
| 4                              | Mitigation strategy | We will expose them to the advantages that exist and we will tell them that they will not change their course but the way they teach it and that they will get closer to the |

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|  |  | students. |
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| <b>Table 7.3.a – Risks/External Menace</b> |                     |   |
|--|---------------------|---|
| 1  | Risk description    | <ul style="list-style-type: none"> <li>• There is no willingness to cooperate on the part of the institutions</li> <li>• Because of the pandemic or other factors the lessons are held at a distance and the students and teachers do not have the necessary equipment</li> </ul> |
| 2  | Probability         | 2   |
| 3  | Severity            | 3   |
| 4  | Mitigation strategy | Reconsidering and redesigning   |