

# Project ArchimedeZ

Think Tank Group # 1  
SOS 15D  
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## **Abstract**

Lt Gen Steven Kwast challenged the Squadron Officer School 15D Think Tank to develop a career-long, non-resident Professional Military Education (PME) approach that fosters creative/critical thinking, motivates Total Force Airmen to participate and provides value to both the individual and the Air Force. To meet this challenge, Think Tank Group 1 developed Project ArchimedeZ, an incentive-focused, learner-centric construct that utilizes existing distant learning resources to provide a value-based, career long learning system to develop leaders in the Air Force for today and tomorrow. A system that is both resource-efficient and enticing to use, Project ArchimedeZ embodies an adaptable framework that seeks to shift the PME paradigm from one of “must do” to “want to do”. In doing so, the United States Air Force can create the types of creative and critical thinkers required for tomorrow’s wars while ensuring relevancy and applicability to today’s Total Force.

## **Introduction**

Professional Military Education (PME) for officers in the Air Force needs an overhaul. PME has great potential to be seen, not as a chore, but something that officers can actually look forward to accomplishing while still meeting Air Force educational goals. This paper presents a proposal for a re-vamped, non-resident, career-long approach that fosters creativity and critical thinking, motivates Total Force Airmen to participate, and provides value to both the individual and that Air Force. This, is Project ArchimedeZ.

This paper will: 1) present the objectives and essential elements of Project ArchimedeZ, 2) describe how the PME material will be delivered to the student, the Project ArchimedeZ portal, 3) describe the proposed content of Project ArchimedeZ, 4) describe incentives that Project ArchimedeZ will give to Total Force Airmen to participate and 5) outline required

resources to implement the program. As an aid to the reader, the PowerPoint Presentation Slides that were developed to present Project ArchimedeZ are attached (Attachment 1).

### **Objectives and Essential Elements:**

In our current non-resident PME system, there are spikes in learning activity across an officer's career (represented by the blue wave at the top of Attachment 1, pg 3). A Captain will spend several months tackling SOS by correspondence, a Major will spend about a year completing Air Command and Staff College by correspondence and Air War College typically takes about two years to complete. Project ArchimedeZ will eliminate those spikes and spread out the workload, thereby creating a truly career-long learning experience (represented by the golden line at the top of Attachment 1, pg 3). It is the objective of Project ArchimedeZ to create this "golden thread" of learning, so that the officer is never complacent. Project ArchimedeZ will spread out the coursework, so that an officer is engaged, most of the time, in some sort of PME but at a manageable level. Rather than a three-hour block, for example, Project ArchimedeZ would deliver a shorter block of material within a module. This would allow the officer to tackle PME more frequently, but with a shorter time commitment at each sitting. This "golden thread" would not only ensure that the spikes in PME are evened out somewhat, but would have the effect of truly connecting the stages of PME throughout an officer's career.

Project ArchimedeZ will also expose the student to a broad spectrum of educational disciplines (e.g. joint environments, foreign studies, business concepts) to create a holistic and balanced officer. Project ArchimedeZ would complement the current in-residence programs by reducing redundant lessons and allowing in-residence students to achieve a required knowledge baseline before attending an in-residence course. As we will see, Project ArchimedeZ will utilize many existing resources, but in new and innovative ways. The core of Project

ArchimedeZ is its learner-centric approach, which will require a standardized baseline of core knowledge, but give the student a myriad of elective options and methods of learning.

One of the unique characteristics of Project ArchimedeZ is its ability to leverage resources that already exist in our Air Force. We currently have multiple centers of education: Air University (AU), the US Air Force Academy (USAFA), the Air Force Institute of Technology (AFIT), all the technical schools, Defense Acquisition University (DAU), and the list goes on. Project ArchimedeZ would pull content and already existing lessons from all educational sources throughout the Air Force and integrate it into the PME curriculum (see Attachment 1, pg 3). This would require the PME administrators to, at first, pull the content from all the Air Force sources and funnel it into the Project ArchimedeZ system, but after that, content management should not require as many manpower resources. With the transformation of Air University, and the stand up of the Air University Learning Center, the movement is already underway to consolidate education resources in the Air Force; Project ArchimedeZ provides a portal for this to happen.<sup>1</sup> Project ArchimedeZ would also utilize content from civilian institutions. By utilizing existing partnerships, and by forging new relationships, Project ArchimedeZ can tap into the vast wealth of courses, Ted Talks, and other online educational content for PME purposes. For the initial “beta test”, ArchimedeZ can pull content from AFIT, AU, USAFA and DAU, expanding outward from there if the initial beta test is successful.

### **The Face of Project ArchimedeZ**

Project ArchimedeZ is primarily an online interface, however it would use a hybrid delivery approach; that is, it combines online content with in-person sessions to create an

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<sup>1</sup> The Air University Learning Center is not fully up and running yet, however this would be an idea group to eventually manage online PME because of its ability to cross-talk between Air Force institutions. Communication is key. For the short-term, manpower and funding would need to be designated to gather the already-existing content, and funnel it through the ArchimedeZ portal to students.

interactive and dynamic learning experience (see Attachment 1, pgs 5-7 for illustration of the Project ArchimedeZ portal). Project ArchimedeZ is designed to be an “A3” platform: that is anytime, anywhere, any device. Project ArchimedeZ is not tied to a .mil address so that students can access their PME from a personal PC or Mac, tablet or smartphone. The current go-to is Blackboard. This is a cumbersome system for use on a tablet or smartphone, and is extremely slow. Project ArchimedeZ would not only use a full-size website, but also utilize apps for use on a tablet or smartphone.

The Project ArchimedeZ portal is basically a circle with different sections inside labeled: tactical, operational and strategic. In the center, connecting all three areas is the Project ArchimedeZ triangle, which represents the ArchimedeZ capstone project, required at the end of completion of the tactical, operational and strategic levels.

For the purposes of this CGO think tank, we will use the “tactical” area on the circle to illustrate how the Project ArchimedeZ portal works.<sup>2</sup> When a student starts their PME journey after they are mission qualified, The USAF will want them to focus primarily on the tactical area of learning.<sup>3</sup> The student will click on the tactical area, and then be directed to another screen. On that screen will be presented several “core” areas that must be completed, and then additional choices for electives (see Attachment 1, pg 6-7). The student must complete a certain number of electives before certain career milestones (before meeting a Major’s board, for example). Once the student clicks on one of the areas of study, he is then given more choices for classes that would satisfy that core area. Some of these courses would require meeting in small groups at the

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<sup>2</sup> We recommend that Air Command and Staff College and Air War College potentially have their own think tanks to assist with development of non-resident PME at those levels.

<sup>3</sup> A student would not start PME until they are mission qualified. That is, after they have finished the initial training necessary for their respective career field. For example, a pilot could spend two years in training before they are ready to start on PME while a JAG or medical doctor could start after their initial technical school training. It would be career field specific.

student's home base, online discussions, or deliverables like completing a paper or a project.

While the exact format is always open for debate and further refinement, the essential elements of Project ArchimedeZ stand out: a pathway through which an officer can develop in areas in which they are interested and still develop in the areas that the USAF determines are essential.

Once the student completes a module, the tracking bar on the outside of the Project ArchimedeZ portal would move, thereby showing the student his or her progress (see blue tracking bar on the outside of the Project ArchimedeZ portal; Attachment 1, pg 5). Also included on the main portal screen is an "on-track" tracker. It is a bar that would show green, if the student is on-track for completing PME before the required milestone, yellow for if they are getting close to the deadline and red for behind the curve. Because of the career-long approach, this would allow the student to accurately gauge where they are in the process (Attachment 1, pg 5). The "on track" bar not only allows the officer to see where they are in the PME journey, but also plays on the innate nature of officers to achieve excellence in all they do, whether that is through their day-to-day job or PME.

### **The Content**

Project ArchimedeZ would require core courses of study at every level. For the tactical level, for example, the core requirements would mirror those currently in-place for SOS; leadership, profession of arms, etc. but with a few tweaks (see Attachment 1, pg 6). There would be specific required modules within those core areas, but on the whole, the student would have different options for satisfying the number of required hours in that content area. For example, the student could conduct three briefings at a Wing stand-up for Communication credit, or he could write a paper for the base newspaper or website. The student would have options in completing the overall requirements for each area of learning.

As seen above, because Project ArchimedeZ is highly customizable, the student will be able to select which class and delivery method he/she wants. Some students are interactive learners while others are more book-oriented. Also, Wing Commanders (Wing CCs) would be able to make suggestions for models that might be particularly relevant for their bases' mission, similar to the recommended CSAF reading list. Also, FGO mentors or facilitators for CGO classes could receive PME credit for their own level of Project ArchimedeZ study.

The electives would draw from additional learning in the core competencies, but also from business concepts and the "soft" sciences, such as psychology, sociology or dispute resolution methods. The electives would also focus on critical thinking skills, core values, program management, etc. The promise of Project ArchimedeZ is not only to provide a new and vibrant approach to non-resident PME, but also to provide the student with a method of learning in which they can become deeply immersed.

In-residence PME is not being eliminated, nor should it. There is great value in in-residence programs. The in-residence experience of in-person, real-world interaction and team problem solving is difficult to replicate in cyberspace. In order to simulate the full in-residence experience, Project ArchimedeZ will use a hybrid delivery method. Through the use of the hybrid delivery method, the goal would be to allow a non-resident student to interact with other officers outside of their career fields, and thus simulate part of the in-residence experience. Electives could cover foundational knowledge specific to other career fields, UCMJ, manpower, budgeting, logistics, with the goal of creating a well-rounded officer that would begin to see how the entire Air Force system fits together. Importantly, these electives allow students to focus on areas of interest. Whether it is a particular area of study, region of the world, or a personally

wear area, the student is given the power to determine what best fits their own academic model and not shoe-horned into a one-size-fits-all curriculum.

One of the concerns of this suggested system is that we would overload officers with PME and still push for our officers to obtain advanced degrees. Project ArchimedeZ would allow students, if they choose, to obtain Master's-level credit for certain courses taken. There is already a form for requesting academic credit (see Attachment 1, pg 8; Attachments 2-3) that this system could utilize. Officers could also receive Specialty Experience Identifiers (SEI) that would show up on the officer's SURF (e.g. Asia-pacific Studies, Joint Warfare, Defense Logistics, etc.) By pursuing further study in a particular area and obtaining an SEI, an officer could highlight themselves as someone capable of filling a niche role. In this way, officers could be given more control and influence over their career progression because they could be given assignments that match with their qualifications.

Finally, Project ArchimedeZ would require three capstones, one for each level (see Attachment 1, pg 5: the triangle in the middle of the portal would lead to the capstone project area). As an example, at the tactical level, the capstone could consist of participation in a Wing-level "think tank" project, or by completing an additional set of Wing-specific learning objectives. By linking the capstone to each individual Wing, a sense of ownership can be established through the officer ranks. This would give Wing Commanders the ability to direct where their subordinates learning efforts are focused. Commanders would not only recognize the benefits PME and Project ArchimedeZ provide to their Wing, but also facilitate networking and critical face-to-face interactions between Wing officers.<sup>4</sup> The Project ArchimedeZ capstone

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<sup>4</sup> The question then becomes, when is a Wing CC going to have time to implement this? Air University could provide reach-back support. The Vice Wing CC could also spearhead this project, or it could be delegated down to another O-6 at the Wing. If there is a standard capstone that would work for a certain

does not have to be a Wing-driven project, but it is an example of a tool that could be available. AU would also provide reach-back for Wings that did not wish to utilize a Wing-driven capstone so and could provide other capstone project options. Students could even suggest their own capstone projects and submit them to AU for approval. Whatever the form, it would be designed to foster creative and critical thinking.

### **Incentives**

Project ArchimedeZ contains multiple incentives that would drive Total Force Airmen to participate. First, because of the “A3” platform, it would be convenient for Airmen across the Force. Officers could accomplish PME at the office, at home, on deployment, on their lunch break, whenever and wherever is best for them.

Progress would be visible on official records. This would not be used to punish any officer, but rather allow an officer to be vectored to certain assignments based upon course completion. For example, certain SEI earned through elective courses could assist in that officer being placed in an assignment where that education could then be utilized. As mentioned before, officers could get credit towards advanced academic degrees through PME electives. Officers could also get certifications that they could mention in resumes.

Project ArchimedeZ would also enhance quality of life. If officers were able to complete PME through a TDY-in-place program at a local base, similar to how Airman Leadership School is currently conducted, this would reduce TDY costs and allow the officers to go home to their families at night. This TDY-in-place program could be as short as a single day or as long as a full workweek, depending on the module. In either case, the students involved will be able to

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Wing, for example, then it might only need to be tweaked once every few years. But, it would give Wing CCs the ability to have the officers at his base tackle an important issue, if the situation arose.

experience, at least for a short time, the type of experiences that make in-residence education so rich and rewarding without the cost and time commitments required of a full in-residence TDY.

### **Resources Required**

Project ArchimedeZ would require an initial commitment of money and manpower, however Project ArchimedeZ would mitigate the initial star-up cost by capitalizing on existing Air Force resources. As shown above, the content already exists in the Air Force to get a beta-test of the program off the ground. Users could suggest content as the program developed, and the Air Force could continue to work on partnerships with accredited civilian institutions. Obviously someone has to manage Project ArchimedeZ, and it has to exist on a server somewhere. We could use the servers already in place for the current PME programs, and tap in to the existing wealth of IT knowledge in the Air Force. Why not offer some sort of PME/certification credit for officers or Airmen who help get Project ArchimedeZ off the ground? We could select a CONUS base and an OCONUS base and test the program out on a small-scale first. It would probably be easiest to start at the CGO level and move up from there.

Above all else, it is important to have buy-in on this project from the highest levels. If this is going to be successful, leadership must emphasize providing time to students to complete PME. The TDY-in-place concept would help with this culture shift. Also, Wing CCs would be responsible for facilitating PME at their respective bases, through the use of base facilities and/or the base education center, training FGO facilitators with AU support and setting up capstone projects. For all of this, reach-back to AU would be available. Project ArchimedeZ would require a registrar, of sorts, and also a cadre of administrators. However, we could transform the resources already being used for non-residence ACSC and Air War College for these functions.

### **Summary**

Project ArchimedeZ is an adaptable framework, and this is part of its effectiveness and appeal. This paper outlines only some of the myriad of possible arrangements for that framework. Courseware can be changed, shifted, added or subtracted depending on current trends and areas of importance to the Air Force. This flexibility allows the users the freedom to learn in their own way. Creating incentives is essential in persuading an overtaxed officer corps to take on a new challenge, particularly one like PME. But by offering value to the individual, coupled with value to the Air Force, Project ArchimedeZ is able to bridge the gap between the two. As a life-long learning initiative, Project ArchimedeZ complements milestone in-residence programs and increases the general PME knowledge of the Air Force. By instituting Project ArchimedeZ, the United States Air Force will find itself with a powerful new weapon to arm its officers with the most up-to-date, relevant, and accessible information with which they can lead the United States Air Force and win our nations wars.

Project ArchimedeZ would ultimately generate an Air Force officer who is self-motivated, professional, possesses internal control over their PME experience and communicates effectively. Reshaping and applying modern technology to the PME non-resident development of an officer will produce the ultimate core that will lead the United States Air Force into the future!



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# Project ArchimedeZ

Developing Tomorrow's Leaders Today!

Operational

20 May 2015

The Intellectual and Leadership Center of the Air Force



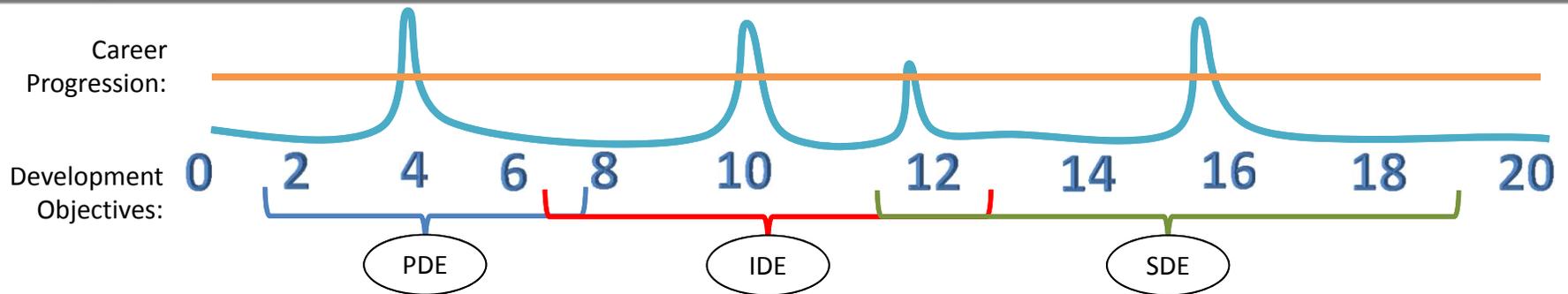
# Essential Elements



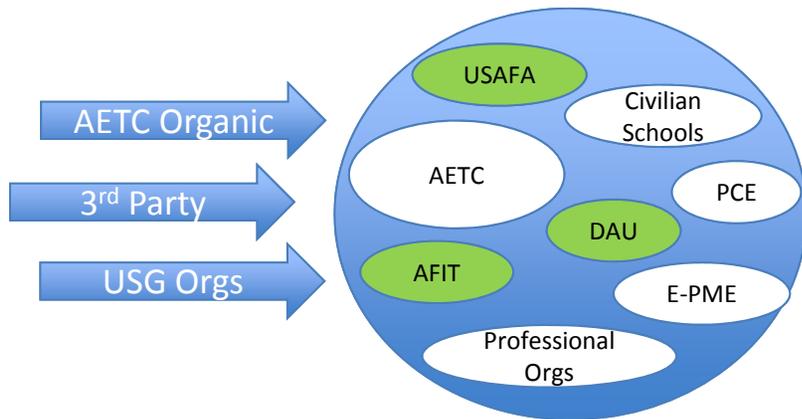
- Value
- Utilize resources/leverage partnerships
- Carrot Focused
- Learner-centric
- Complements in-residence PME
- Minimize operational impact



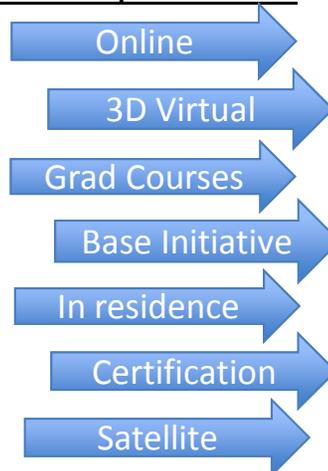
# ArchimedeZ Model



## Source of Content



## Delivery Methods



## ArchimedeZ Portal





# Login Page



The screenshot shows a web browser window with the URL <http://www.au.af.mil/au/index>. The page header includes the Air University logo and navigation links: AU Home, AETC, AU FAQs, AU Index, AU Schools, AU Site Contacts, USAF, AF Recruiting, and AFRC Recruiting. The main content area features a large blue graphic with the text "ArchimedeZ" and "THE INTELLECTUAL AND LEADERSHIP CENTER OF THE AIR FORCE". Below this, there is a login form with the following fields and buttons:

Username:

Password:

Developing Tomorrow's Leaders Today!

The Windows taskbar at the bottom shows the system tray with the time 3:55 PM and date 4/29/2013.



# ArchimedeZ



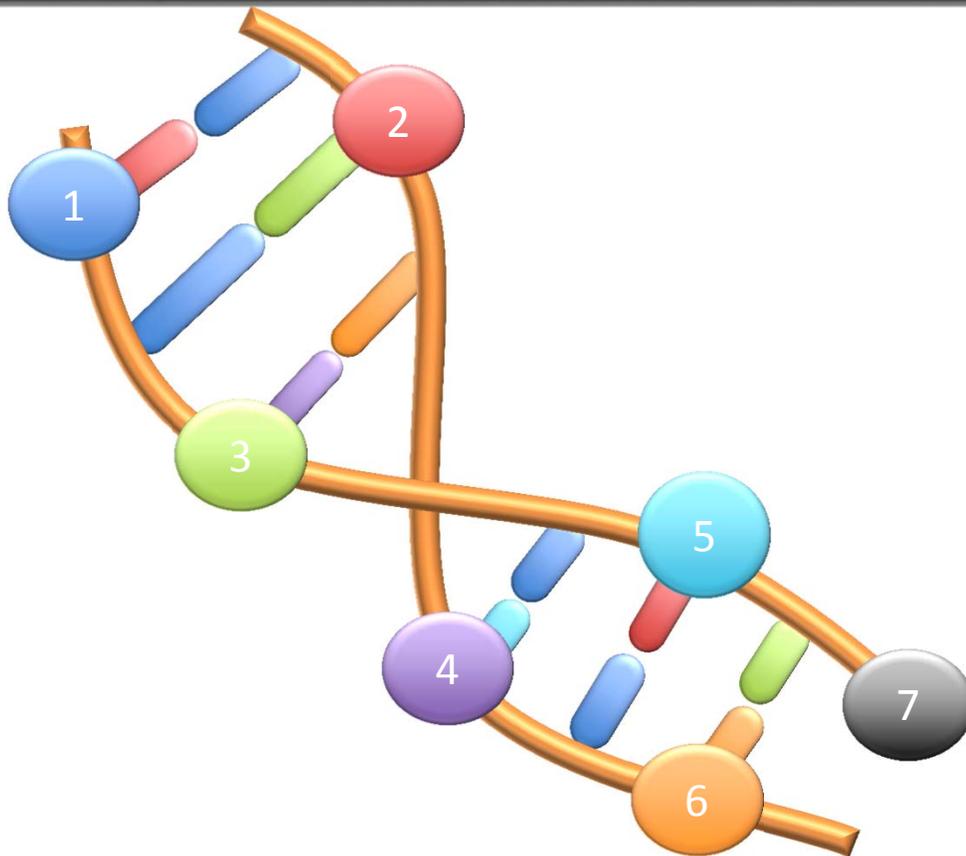
Lt Kwast, Steven L.

On Track





# Tactical - Objectives



- 1 Critical Thinking
- 2 Corporate Functions
- 3 Communications
- 4 Core Values
- 5 Project Management
- 6 Security Studies
- 7 ArchimedeZ Capstone Project



# Security Studies



6

## Security Studies





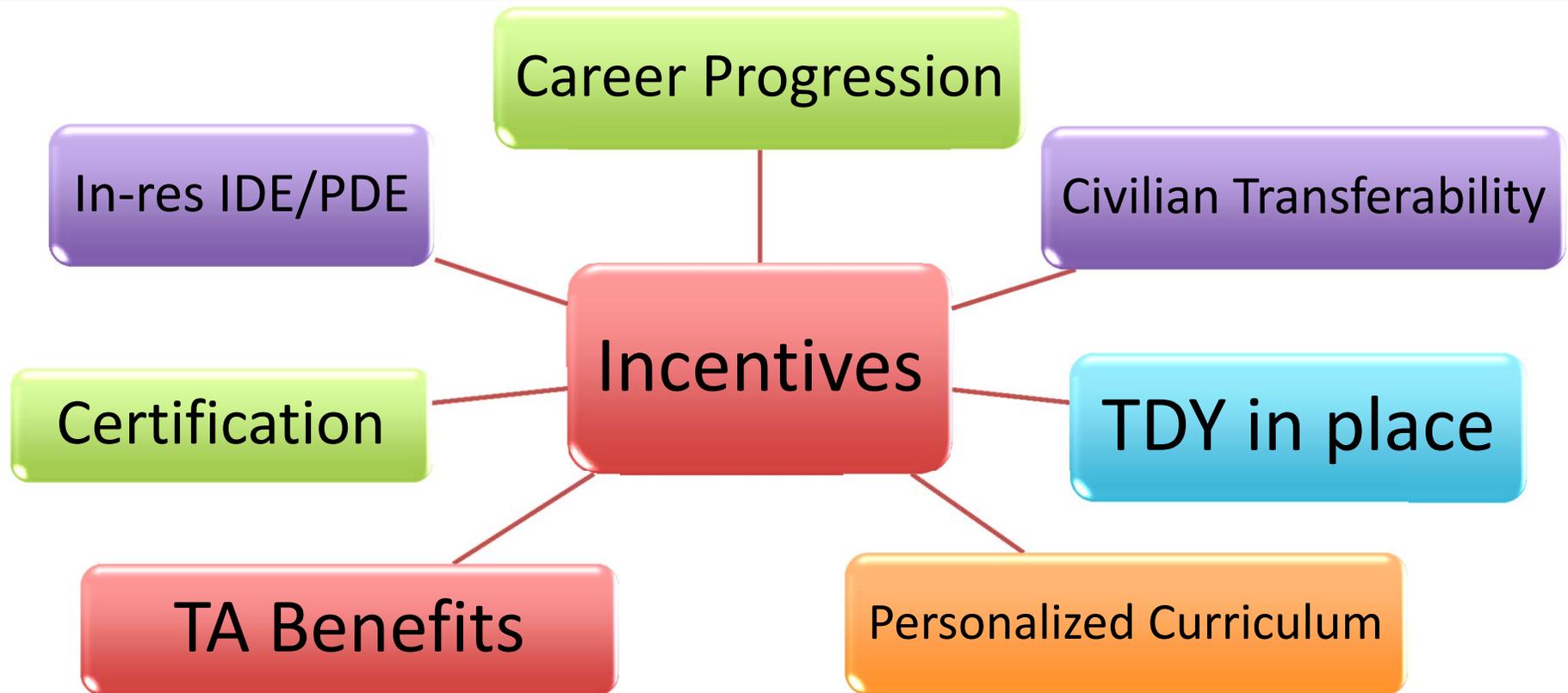
## Equivalency/Fulfillment Program



- Intend that the ArchimedeZ's site will have the option for current and potential equivalent courses
- Individuals seeking to learn about obtaining credit for non ArchimedeZ course would visit a directive which would outline the alternate means of obtaining course credit
  - SF 182 Authorization, Agreement and Certification of Training
  - DD Form 2518 Fulfillment of DoD Mandatory Training Requirements



# Individual Incentives





# Questions?



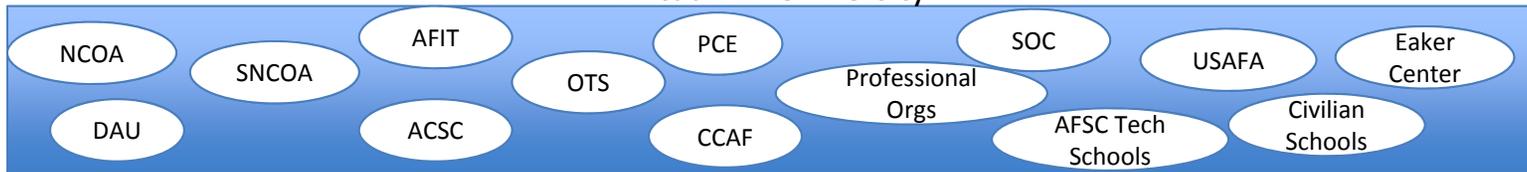


# Conceptual Model



## Virtual Air University

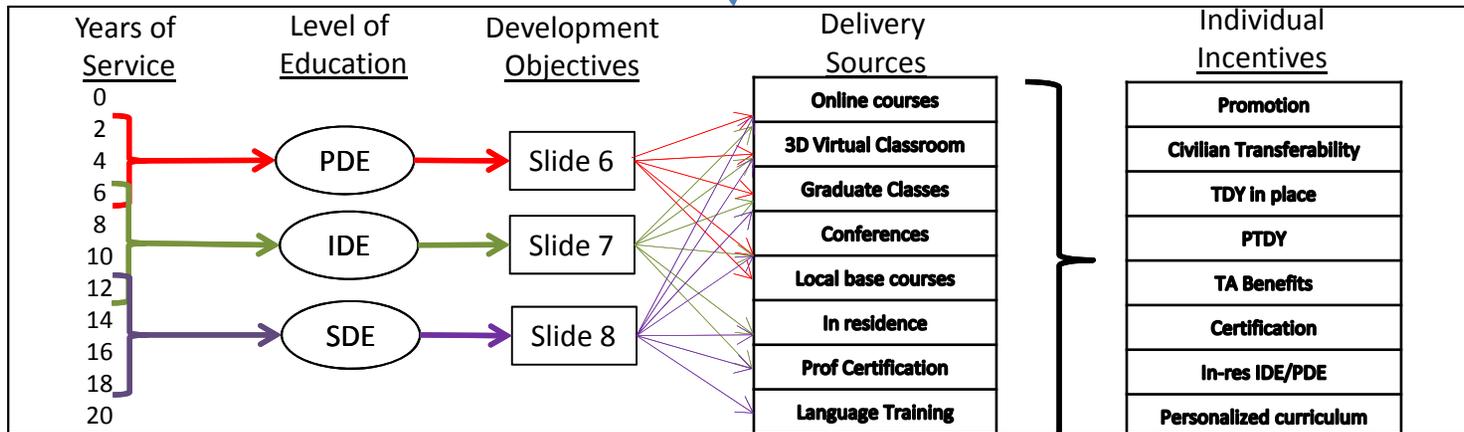
Intellectual Property Owners



Output



Proposed PME Initiative

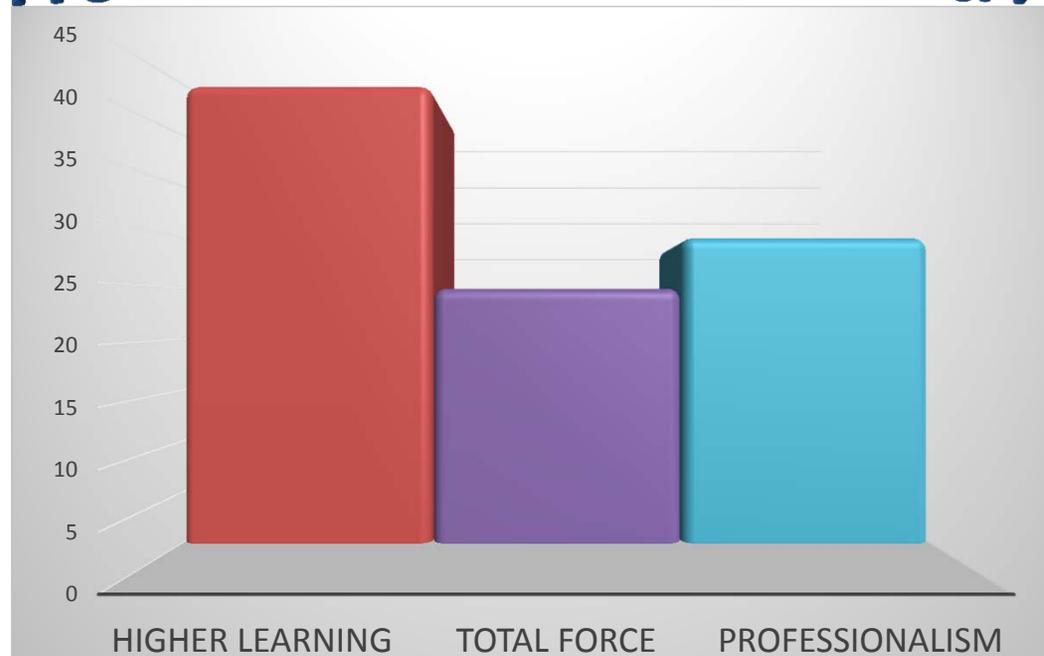




# Fundamental End State



## How Balanced Are You?





THE AIR UNIVERSITY



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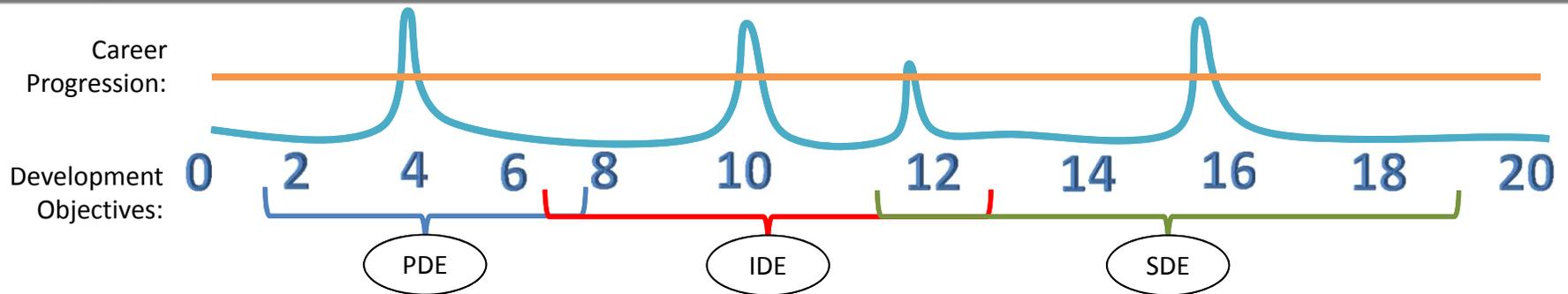
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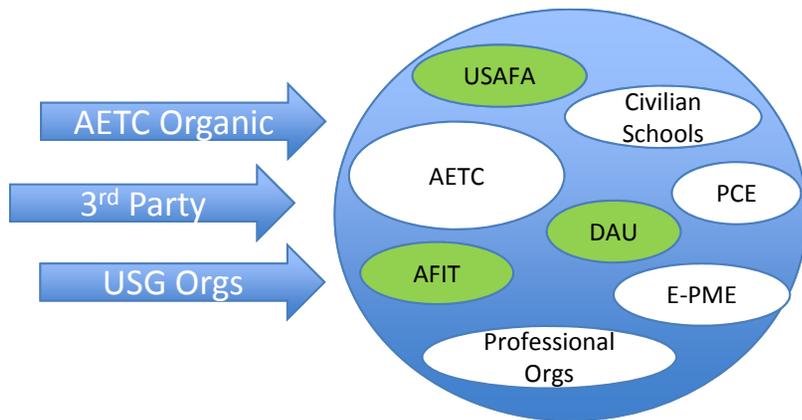
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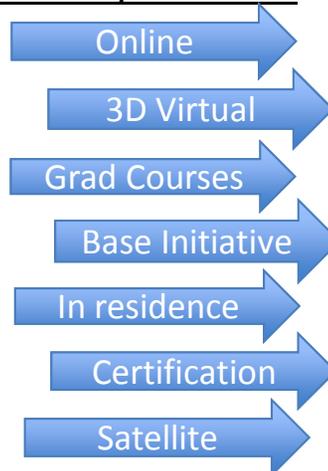
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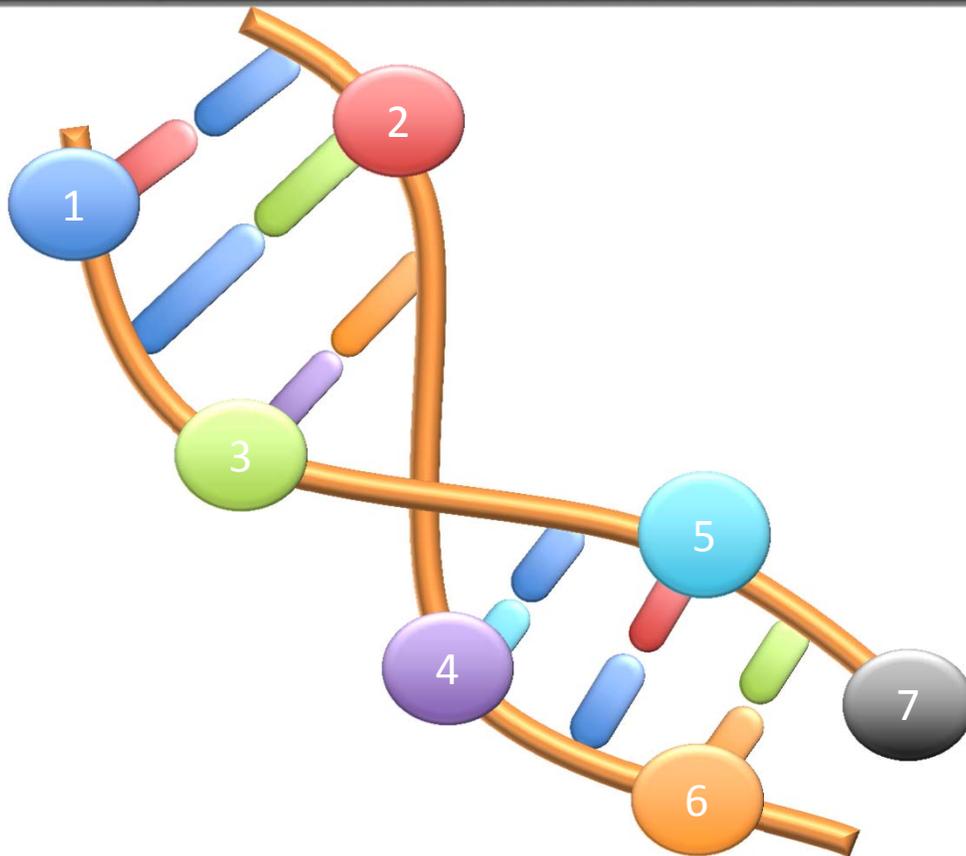
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# Security Studies



6

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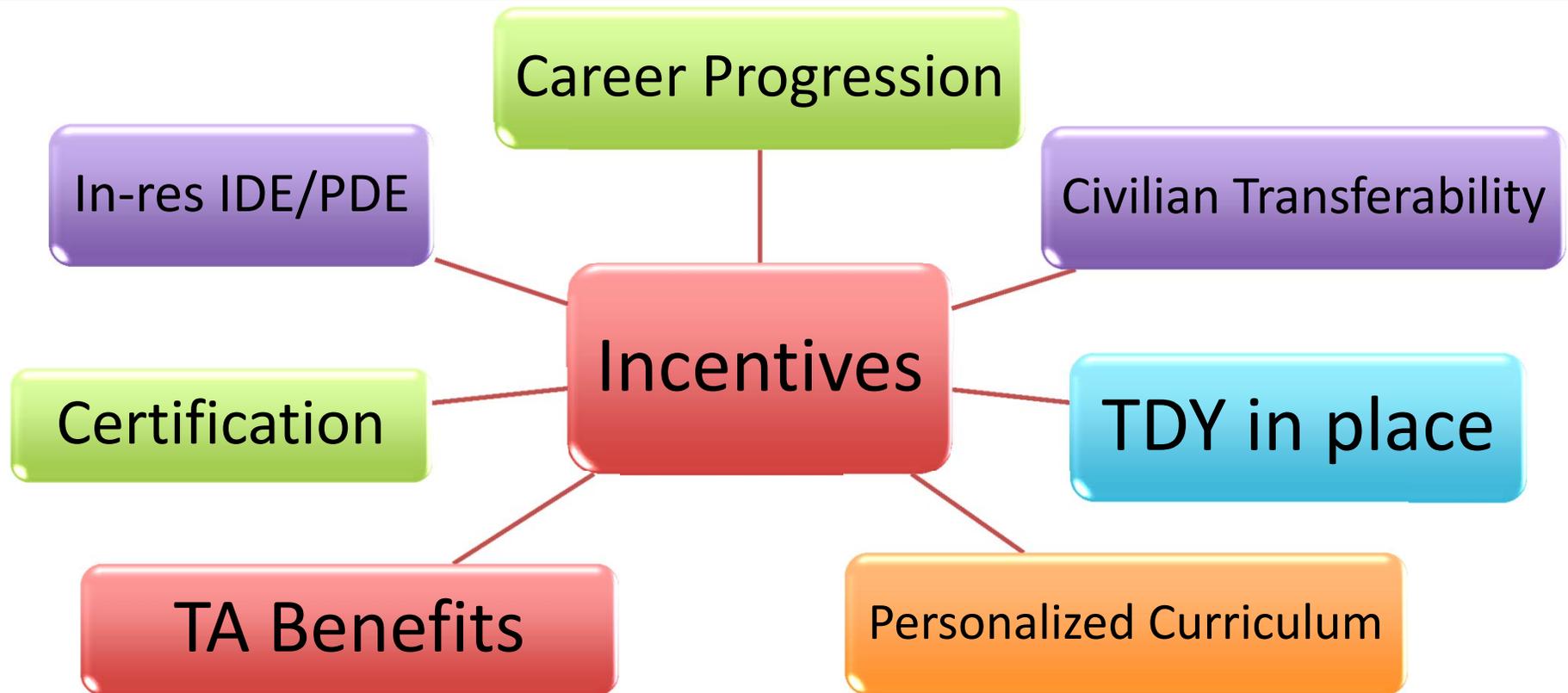
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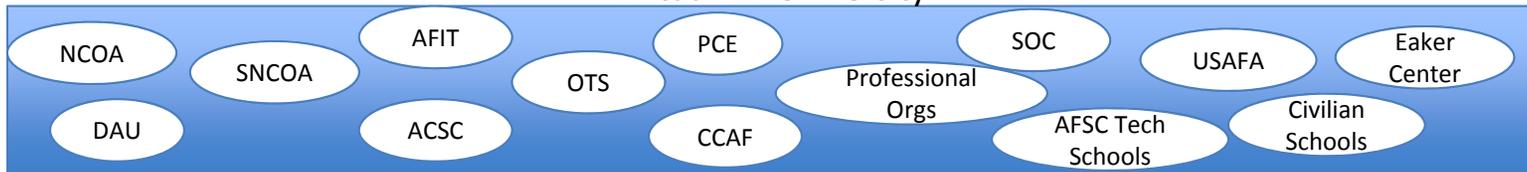


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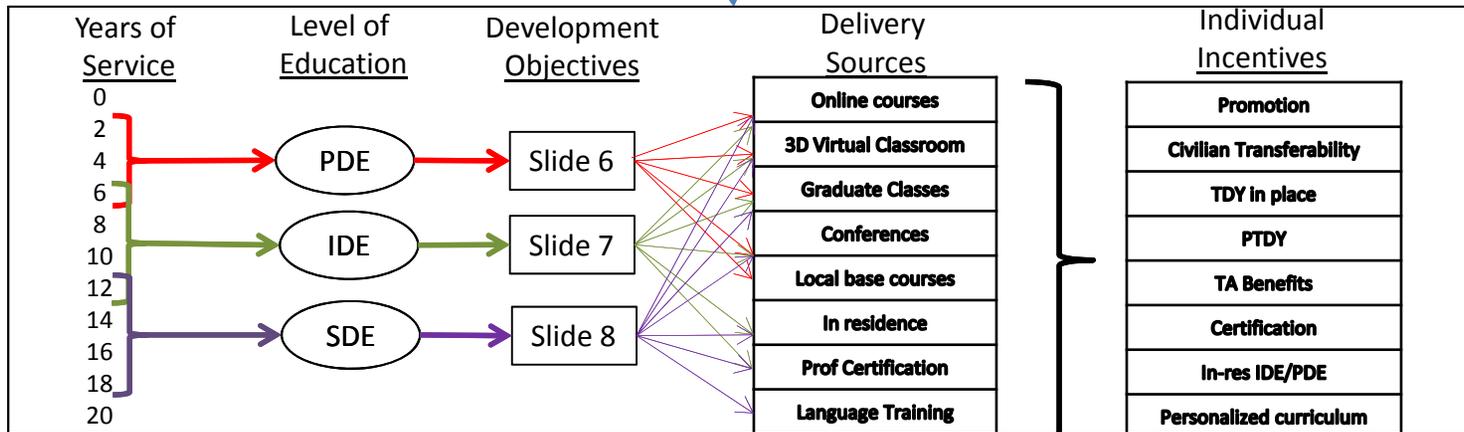
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