

Education Module

Introduction

The Education Module empowers you to enroll your personnel in various educational programs, be it mastering Mech Repair intricacies or undergoing military boot camp training. It aims to simulate the educational systems of the Inner Sphere and beyond.

Due to the complexities of Clan education, we decided not to support it at release. However, be assured, it will be coming at a later date.

Terminology

This module presents two categories of educational institutions: Local, and Prestigious Academies. For simplicity, they will be collectively referred to as 'academies' throughout this document. It's worth noting that the term 'academy' is applied broadly here, encompassing various educational settings, including military boot camps and apprenticeships, where the term might not conventionally apply.

Academy Sets

Academies are organized into sets, each represented by individual .xml files containing information for every academy within the set. Instructions for crafting your own Academy Sets are outlined later in this document.

Upon release, this module features two Academy Sets: Local Academies, and Prestigious Academies. These are known as the 'standard sets'.

Important: It's important to note that you should refrain from deleting or directly editing the standard Academy Sets. Rather, the recommended approach is to disable the original sets in Campaign Options and create duplicates for customization.

Education Level

Throughout this document, the term "Education Level" will be frequently mentioned. Education Level is a newly introduced characteristic indicating the level of education attained by an individual. It spans four tiers, from Early Childhood to Doctorate. The Education Level of a person is displayed on the Person View pane within the Personnel panel of MekHQ.

Skills and Abilities

Small Arms:	4+
Highest Education:	High School

Design Note: We have plans to develop a Personnel Backgrounds module, which will generate random backgrounds and histories, including Education Levels. However, this feature is not yet in pre-development.

As a temporary measure, upon the initial right-click action on an adult within the Personnel Panel of MekHQ, they will automatically be assigned an Education Level of 'High School'. This interim solution will be phased out once the Personnel Backgrounds Module is implemented.

Campaign Options

This module introduces a number of new Campaign Options. These allow you to adjust the module to your preferences.

Education

☒ Enable Education Module

XP Rate

3

Maximum Jump Radius

5

☒ Enable Reeducation Camp Faction Change

Standard Sets

☒ Enable Local Academies ☐ Enable Prestigious Academies

☐ Override Requirements

☒ Show Ineligible Academies

Random XP and Skill Bonuses

☒ Graduation Bonuses

☒ Random Monthly XP

Random XP Rate

1

Weekly Dropout & Washout Dice

Adult Dropout Die Sides

1,000

 Child Dropout Die Sides

10,000

Accidents & Events

☐ All Ages Affected

Military Academy Training Accidents Die Sides

10,000

Enable Education Modules

This option toggles the entire module on or off.

XP Rate

Some curricula award a fixed amount of XP, in addition to random monthly XP. This setting determines how much xp is awarded per Education Level of stud.

Enable Reeducation Camp Faction Change

When enabled, Reeducation Camps will alter the origin faction of graduates to align with the campaign faction.

Maximum Jump Radius

This option defines the maximum distance from the campaign's current location that this module will search for non-local academies. To minimize system load, the module employs an abstract process for calculating jump paths, which may not always precisely align with the actual jump route.

Standard Sets

These options enable you to deactivate the two standard sets that come pre-installed with this module.

Override Requirements

If enabled all requirements to attend an academy are disabled, allowing personnel to be assigned to any academy. Regardless of age, distance, education level, or the year of the campaign. This option is included to assist the testing of new academy sets and is not intended for general play.

Show Ineligible Academies

This option determines whether MekHQ should still display academies that the selected personnel are ineligible to attend.

Random XP and Skill Bonuses

Each week, personnel attending an academy have the chance to earn additional XP, which is determined by the academy's Faculty Skill (explained later). Upon a successful roll, the student will gain XP equivalent to the 'Random XP Rate' option. Moreover, upon graduation, there is a slight possibility that the student will receive a permanent +1 bonus to a semi-random Skill. Disabling 'Graduation Bonuses' eliminates this opportunity.

Weekly Dropout & Washout Dice

These options determine the probability of a student discontinuing their education or leaving their Caste. Dropouts happen when rolling a 1 on a dice with sides equal to the number specified in the respective option. For instance, if 'Adult Dropout Die Sides' is set to 100, there will be a 1 in 100 chance of a dropout occurring each week. Setting any of these options to 0 will deactivate random dropouts and washouts.

Accidents & Events

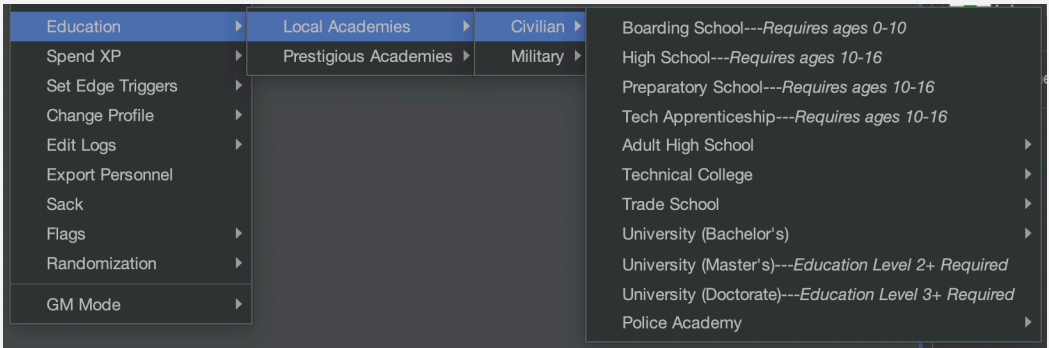
All Ages: If enabled, child students will be at risk of fatal accidents.

The probability of a student experiencing a potentially fatal training accident is similar to 'Weekly Dropout & Washout Dice', an accident happens when rolling a 1 on a dice with sides equal to the number specified in the corresponding option. Setting a particular option to 0 deactivates accidents for students covered by that option.

Accessing the Module

To access the Education Module, right-click on a person within the Personnel panel, then proceed to select 'Education'. This action will present you with a menu displaying Academy Sets, Academies, and subsequently, Qualifications.

Selecting a qualification enrolls any selected personnel in that qualification.



Academies

Local, & Prestigious Academies

Academies are categorized into two main types: Local Academies, and Prestigious Academies.

Local Academies

Local Academies are educational institutions presumed to exist but not explicitly named in canon. These encompass various establishments such as generic military boot camps, high schools, and boarding schools. Local Academies exclusively admit applicants currently residing on their respective planets.

The Local Academies standard set comprises the following civilian academy types:

- Boarding Schools
- High Schools
- Preparatory Schools
- Military Schools
- Tech Apprenticeships
- Adult High Schools
- Technical Colleges
- Trade Schools
- Universities
- Police Academies
- Reeducation Camps

Additionally, it includes the following military academy types:

- Bootcamps
- Military Academies
- NCO Candidate Bootcamps
- Warrant Officer Candidate Schools
- Officer Candidate Schools

Prestigious Academies

Prestigious Academies are renowned institutions explicitly mentioned in at least one canon source. They typically offer superior curricula compared to local academies, boast higher Faculty Skill levels, and accept students from outside their home planet.

The Prestigious Academies standard set comprises over 160 named academies.

Military or Civilian

Academies are categorized into Military, and Civilian types. While primarily for ease of categorization, each category does entail certain special events and rules exclusive to academies of that type.

Attendance Characteristics

To be eligible to attend an academy, each prospective student must pass a series of checks based on academy characteristics. If a person is unable to attend their chosen academy, it will be due to one or more of the following criteria:

Construction, Destruction, & Closure Years

Students cannot attend an academy that hasn't been constructed, has been demolished, or has been shuttered. Such academies will not be visible on the person's list of available academies.

Too Old/Young

Students who fall outside the age bracket specified by the academy are ineligible to attend.

Unqualified

Certain academies may necessitate that students meet a designated minimum Education Level before they can enroll.

Faction Conflict

Academies will decline students originating from a personal or campaign faction engaged in conflict with the academy's faction. For local academies, a student must pass this check for at least one of the system's factions to be considered eligible for attendance.

Certain Prestigious Academies may reject all applicants originating from factions outside their own.

Out of Range

Students cannot attend academies located beyond the distance specified in the 'Maximum Jump Radius' campaign setting.

No Population

It should go without saying, but students cannot attend an academy in a system without a population.

Academic Stages

When a student enrolls in an academy, they undergo a number of stages of education: journey to campus, education, graduation or dropping out, and journey from campus. The student's current stage, along with the number of days remaining, is visible on the Person View of the Personnel panel.

Upon enrolling in a qualification, students are designated as "Student" and are no longer considered Active personnel. Reassigning a student from the Student status will promptly withdraw them from their education and return them to active duty. Once moved from the Student status, personnel cannot revert to their prior education status and must be re-enrolled.

Small Arms:	4+
Highest Education:	High School
Education Stage:	Undergoing Education
Education Time:	150 days

Preparatory Schools

Certain academies are categorized as "preparatory schools." These institutions operate on a different enrollment basis, where attendance is contingent upon age rather than fixed enrollment periods. Graduation occurs only after the student has reached a specific age threshold. Preparatory schools are primarily utilized for childhood education.

Design Note: While the term "preparatory school" may not be universally applicable, it serves as the most suitable descriptor for this context.

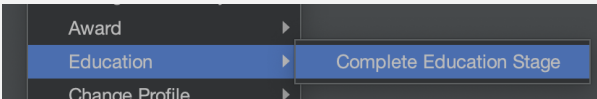
Journey from Campus

While the journey to campus and education stages have a relatively fixed duration, the journey from campus is more dynamic. Upon enrolling in an academy, the academy location is recorded. When a student begins their journey back to the unit, MekHQ calculates the travel duration based on the unit's current location. If the unit relocates while the student is in transit, the travel time will adjust accordingly based on the unit's new location.

It's important to note that, similar to the 'Maximum Jump Radius' setting, we employ a simplified version of the typical jump route calculations to mitigate system load, particularly when multiple students are in transit simultaneously. This means that travel time might not match the interstellar map.

Skipping an Academic Stage

While in GM mode, you can manually advance an academic stage. Right-click on the personnel, then select the Education option. Choose 'Complete Education Stage' to finish the current education stage. You can repeat this process multiple times to complete the education entirely.



General Characteristics

When selecting an academy you will be presented with a list of qualifications offered by that academy. Hovering over a qualification will show a tooltip showing all the details for that qualification.

Curriculum

This section lists the Skills improved when successfully obtaining the chosen qualification. It also shows what experience level will be obtained (ultra-green, green, regular, veteran, or elite). If no improvement will be made, this will also be shown. Generally, the higher the Education Level offered by the academy the better the Skill improvement will be.

Some qualifications do not improve Skills, but instead provide set XP. When graduating, a student will gain a set amount of XP, based on the Education Level offered by the academy.

A technical college serves as a hub for specialized education in fields crucial to the advancement of technology and warfare. Students enrolled in technical colleges undergo rigorous training in disciplines such as aerospace engineering, robotics, computer science, and weapon systems development. The curriculum combines theoretical knowledge with practical hands-on experience, utilizing state-of-the-art laboratories and workshops to foster innovation and skill acquisition.

Curriculum:
Tech/Mech (Green)

Tuition: 0.0 CSB
Duration: 85 weeks
Travel Time: 0 days (Galatea)
Faculty Skill: 7+
Education Level: College

Tuition

This is the C-Bill cost for a student to attend the academy and is based on Education Level (modified by Base Academic Skill). Tuition covers the entire duration of the qualification and travel costs are assumed to be included. Some academies may offer a discount to personnel (or campaigns) whose faction matches the academy faction.

Duration

This is how long (in days or weeks) the qualification will take to complete. Training Accidents or Graduation Events may dynamically increase the qualification's duration.

Distance

This is how long (in days or weeks) it will take for the student to reach campus. This has a minimum value of 2 days, reflecting the student traveling and settling in before they begin their education.

Faculty Skill

This is the target number for weekly random XP gain while a student is undergoing education. Each week, MekHQ will roll to determine if a student earns additional XP. To minimize Daily Report notifications, this XP gain occurs behind the scenes. To secure additional XP, the student must roll equal to or higher than the target number on 2d6.

Education Level

This is the Education Level acquired upon successfully completing the qualification. If this level is higher than the student's current Education Level, their Education Level will be increased to match this value upon graduation.

Academic Events

Throughout a student's academic journey, they may encounter various events, both randomized and predetermined. These events encompass the closure or destruction of an academy, the onset of war, training accidents, or the student opting to drop out of their education. However, the ultimate goal every student aspires to achieve is graduation.

Academy Destruction

In the turbulent Inner Sphere, violence spares no one, and when a WarShip hovers overhead, its bombardment shows no discrimination. While Prestigious Academies boast superior facilities and curricula, they come with a drawback: if a student is on-site when an academy is destroyed, there's a possibility they will be designated as "Missing." The ultimate fate of the student is left to the discretion of individual players.

Campaigns with the 'All Ages' option disabled will ensure that all child students automatically survive the destruction of an academy.

Design Note: acknowledging the sensitivity surrounding real-world events, students being depicted as killed in academy attacks may evoke discomfort. Hence, opting for the "Missing" status instead of death.

Mechanics

When an academy is destroyed all students roll 2d6, surviving on a roll of 5+. Surviving students begin their journey back to the unit.

Academy Closure

Not all Prestigious Academies meet closure due to violence. Occasionally, circumstances arise leading to their closure. In such instances, all students are expelled, commencing their somber journey back home.

Faction Warfare

Occasionally, war erupts between previously tranquil neighbors. In such scenarios, any student originating from a faction (or campaign faction) engaged in conflict with the academy faction is subject to expulsion.

Dropouts & Washouts

Not all students can endure the stress and demands of academic study. Each week, they must roll randomly to determine whether they remain in education. The size of the dice rolled is determined by the relevant campaign options. If a student fails their dropout roll, they commence their journey back to the unit.

Safety Net:

Students are unable to drop out if there are less than 10 days remaining in their education. It is assumed they recognize they are in the final stretch and choose to persevere.

Design Note: I implemented this safety net to prevent players from experiencing the frustration of students dropping out with only a few days left in their education.

Reeducation Camp Washouts

Students who drop out while attending a Reeducation Camp are presumed to have escaped the camp, resulting in their designation as missing.

Training Accidents

Each week, students enrolled in a military academy must undergo a check to determine whether they experience a training accident. The size of the dice used for this check is determined by the relevant campaign options.

If an accident transpires, the student rolls 2d6. On a result of 5 or higher, the accident is non-fatal. Instead, the student is hospitalized for 3d6 days, extending their education duration by this value.

Campaigns with the 'All Ages' option disabled guarantee that all child students automatically survive training accidents.

Preparatory School Training Accidents

Accidents can still occur at academies designated as 'preparatory schools,' but if the accident is non-fatal, the hospitalization duration has no practical effect and is included solely for flavor.

Graduation

The eagerly awaited day arrives for every successful student, a day marked by celebration and, potentially, peril. Graduation ceremonies vary significantly depending on whether the academy is Clan-affiliated. Each is described below.

Graduation

Graduation is represented by a degree of abstraction, symbolized by a roll of a 100-sided die.

1-5: The student fails to graduate. Any Skill improvement or Bonus XP is reduced by 1 step. For instance, 2 education level's worth of XP becomes 1, and a Skill that should have improved to Regular instead improves to Green. XP reduced below one step offers no benefits, and this reduction may result in no Skill improvement.

6-20: The student fails to graduate but can retake one or more classes. Graduation will be attempted again in 3d6 days. This outcome can occur multiple times until the student eventually graduates or fails completely.

21-89: The student successfully graduates. Their Skills are improved appropriately, and if relevant, the Bonus XP roll is made. The students' Education Level is increased appropriately.

90-99: The student graduates with honors. This mirrors a normal graduation but with the possibility of gaining a permanent bonus to one Skill. MekHQ randomly selects one Skill taught by the qualification or Bonus XP and applies a permanent +1 Bonus to that Skill. If Bonus XP is chosen or the Skill already has a +1 or greater Bonus, the student gains 2d6 XP. If 'Graduation Bonuses' are disabled, this is mechanically identical to a normal graduation.

100: The student graduates at the top of their class. This mirrors graduating with honors, but two Skills gain a +1 Bonus or additional XP.

Preparatory School Graduation

For students graduating from a Preparatory School, the graduation process is simplified, given its primary focus on child students. Graduation is successful on a d100 roll of 30 or higher. Characters rolling lower than 30 still graduate, but with reduced skill gain, as per the failure to graduate condition. It is not typically possible to fail to graduate from a Preparatory School.

Military Graduation

Upon graduating from a military academy, students will receive a promotion recommendation. This recommendation is purely for flavor and holds no mechanical significance.

[Silvio Kubel](#) is now entitled to the rank of Private (or regional equivalent).

Master's & Doctorates Degrees

Graduating from a civilian academy at Education Level 3 confers upon the student a Master's Degree. This holds no mechanical advantage.

Graduating from a civilian academy at Education Level 4 awards the student with a Doctorate, entitling them to use the 'Dr' honorific. This honorific is automatically applied to the character. However, this holds no mechanical benefit otherwise.

Creating an Academy Set

File Anatomy

Academies are organized into 'sets,' which are .xml documents containing all the information for the academies within that set. These sets should be stored in the *data/universe/academies/* directory.

All academy sets should commence with the format header: `<?xml version="1.0"?>`, followed on the next line by `<academies>`. The set should conclude with `</academies>`. Each academy is encapsulated by `<academy></academy>`. It's crucial to ensure that you always close off a tag.

```
<?xml version="1.0"?>
<academies>
  <academy>
    <name>Trueborn Crèche</name>
    <isPrepSchool>true</isPrepSchool>
    <isClan>true</isClan>
    <isTrueborn>true</isTrueborn>
    <description>Alongside their sibkin, Trueborn Clansmen begin their life in the crèche.</description>
    <factionDiscount>0</factionDiscount>
    <isLocal>false</isLocal>
    <locationSystem>Terra</locationSystem>
    <constructionYear>2807</constructionYear>
    <durationDays>10</durationDays>
    <facultySkill>4</facultySkill>
    <educationLevelMax>0</educationLevelMax>
    <ageMax>10</ageMax>
    <qualification>Tuition & Primary Care</qualification>
    <curriculum>Bonus XP, Small Arms</curriculum>
    <qualificationStartYear>2807</qualificationStartYear>
    <baseAcademicSkillLevel>2</baseAcademicSkillLevel>
  </academy>
</academies>
```

Important: As previously mentioned, it's crucial never to delete or edit the three standard sets: Local Academies, and Prestigious Academies. Instead, these can be disabled in Campaign Options. If you intend to make edits to the standard sets, it's advisable to create a copy with a different name and then disable the original in Campaign Options.

Ordering

Academies will appear in MekHQ in the same order as they are listed in their Academy Set.

Tags

Each academy comprises 26 'tags,' which are characteristics informing the module how to handle each academy. It's important to note that not all academies will utilize every tag.

Special Characteristics

Most tags come with special characteristics that dictate how they should be implemented.

Default Values

A majority of tags have default values (noted in parentheses below each tag name). If the value of a tag matches its default value, including that tag when writing the academy is unnecessary. This explains why not all tags are present for each academy in the three standard sets.

Critical Tags

Any tag listed as *Critical* is essential and must be included. These tags do not have default values, and failing to include them will result in the academy set failing to load.

Stacking Tags

Some tags can be included multiple times, as noted with 'stacking,' and the usage of each is elaborated on in the corresponding tag description.

Tag Descriptions

<name></name>

(Default: Error: Name Missing)

This tag specifies the name of the academy. Each academy within an Academy Set must have a unique name.

<type></type>

(Default: None)

This tag specifies the type of academy and is used exclusively by the Awards Module. Setting this to None will tell the Awards Module to ignore this academy.

None

High School

College

University

Military Academy

Basic Training

NCO Training

Warrant Officer Training

Officer Training

<isMilitary></isMilitary>

(Default: false)

Set to *true* if the academy is Military; otherwise, set to *false*.

<isReeducationCamp></isReeducationCamp>

(Default: false)

Set to *true* if the academy is a Reeducation camp; otherwise, set the *false*.

<isPrepSchool></isPrepSchool>

(Default: false)

Set to *true* if the academy is a Preparatory School; otherwise, set to *false*.

<description></description>

EMPTY (Default: Error: no description)

This tag contains the description of the academy, which appears at the top of the qualification tooltip.

<factionDiscount></factionDiscount>

(Default: 10)

This tag specifies the discount applied to Tuition if the applicant's personal faction matches the academy faction. It should be set to *0* if *isFactionRestricted* is set to *true*.

<isFactionRestricted></isFactionRestricted>

(Default: false)

Set to *true* if the academy only accepts applicants whose personal (or campaign) faction matches the academy faction. Academy faction is determined by the faction controlling the system the academy is in.

<isLocal></isLocal>

(Default: false)

Set to *true* if the academy is a Local Academy; otherwise, set to *false*.

<locationSystem></locationSystem>

CRITICAL, STACKING

This tag specifies the location of the campuses associated with the academy. Each campus should have a separate set of tags.

```
<locationSystem>Galax</locationSystem>
<locationSystem>Terra</locationSystem>
<locationSystem>A Place</locationSystem>
```

For local academies, set this tag to "Terra". Though this information won't be utilized by MekHQ, its absence will cause issues if left empty.

For academies with multiple campuses, where campuses have different *constructionYear*, *destructionYear*, or *closureYear* dates, it's recommended to create different academy entries for each. However, ensure that each academy within an academy set has a unique name, even if they represent different campuses.

<constructionYear></constructionYear>

(Default: 2300)

This indicates the year the academy was built.

<destructionYear></destructionYear>

(Default: 9999)

This represents the year when the academy is scheduled for destruction.

<closureYear></closureYear>

(Default: 9999)

This denotes the year when the academy is set to close.

<tuition></tuition>

(Default: 0)

This is the base cost for attending the academy. MekHQ dynamically adjusts this based on the Education Level of each qualification.

For military academies we use the following calculation:

$$3500 * a * b * c$$

a = mean number of skills per qualification - 1 (minimum 1)

b = 1 + (0.25 * (7 - faculty skill))

c = 2 (if durationDays = 300 or 900), else 1

For civilian academies we use the same calculation, but the base value is 5000, not 3500.

<durationDays></durationDays>

(Default: 10)

This indicates the duration in days of each qualification. Typically, it's set to 300, 600, 900, or 1200 days. If set to 9 or less, dropouts or washouts are prevented. This can be used to create Preparatory Schools where students can't drop out.

<facultySkill></facultySkill>

(Default: 7)

This is the target number for the weekly random XP roll. It represents the quality of facilities and faculty at the academy.

When writing the standard sets we used the following rates:

9: Ultra-Green

8: Green

7: Regular

6: Veteran

5: Elite

<educationLevelMin></educationLevelMin>

(Default: Early Childhood)

This specifies the minimum Education Level required to attend the academy.

<educationLevelMax></educationLevelMax>

(Default: High School)

This indicates the maximum Education Level provided by the academy.

<ageMin></ageMin>

(Default: 0)

This sets the minimum age required for attendance.

<ageMax></ageMax>

(Default: 9999)

This sets the maximum age for attendees. For Preparatory Schools, this represents the graduation age.

<qualification></qualification>

CRITICAL, STACKING

This is the name of the qualification. Each qualification within an academy should have a unique name.

<curriculum></curriculum>

CRITICAL, STACKING

This lists the Skills associated with the qualification. Each Skill should be separated by a comma.

The list of accepted skills is as follows:

- | | | |
|---------------------------|-----------------------|-------------------------|
| - XP | - Piloting/Spacecraft | - Tech/Vessel |
| - Piloting/Mech | - Gunnery/Spacecraft | - Astech |
| - Gunnery/Mech | - Artillery | - Doctor |
| - Piloting/Aerospace | - Gunnery/Battlesuit | - Medtech |
| - Gunnery/Aerospace | - Gunnery/ProtoMech | - Hyperspace Navigation |
| - Piloting/Ground Vehicle | - Small Arms | - Administration |
| - Piloting/VTOL | - Anti-Mech | - Tactics |
| - Piloting/Naval | - Tech/Mech | - Strategy |
| - Gunnery/Vehicle | - Tech/Mechanic | - Negotiation |
| - Piloting/Aircraft | - Tech/Aero | - Leadership |
| - Gunnery/Aircraft | - Tech/BA | - Scrounge |

<qualificationStartYear></qualificationStartYear>

CRITICAL, STACKING

This specifies the year the qualification becomes available.

<baseAcademicSkillLevel></baseAcademicSkillLevel>

(Default: -1)

This modifier applies to Education Level to determine the final Skill experience level after completing a qualification. For the standard sets base academic skill is normally equal to -1 if duration is less than 900 days, otherwise it is set to 0.