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SOME STRATEGIES TO ENHANCE THE EFFICACY OF BORDER  
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## SOME STRATEGIES TO ENHANCE THE EFFICACY OF BORDER SERVICE TRAINING

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### ABSTRACT

This study examines the implementation and outcomes of a military training program conducted at the Border Service School of the University of Internal Affairs in partnership with a client organization from 2018 to 2020. The primary objective is to evaluate the effectiveness of the existing training structure and recommend ways to enhance cadet learning outcomes. Despite limitations in scope and resources, the study identifies areas for improvement in content delivery and instructional methods. A key focus of the research is the utilization of reflex-based training, a method commonly utilized in military vocational education systems in Russia and China.

The approach emphasizes repetitive, scenario-based training involving officers and sergeants to deepen their understanding of operational conditions and enhance their performance. The report highlights initial findings and progress in developing and refining professional competency programs for military officers under the mentorship of experienced instructors at the Border Service School. A comparative analysis of training methodologies employed in similar institutions in Russia and China demonstrates that integrating associative-reflex methods with modern technologies, such as artificial intelligence and virtual simulation environments, significantly enhances training outcomes.

The results suggest that the current infrastructure and pedagogical approaches at the Border Service School necessitate modernization, and the study recommends a comprehensive framework incorporating smart classrooms, virtual laboratories, augmented reality training environments, and intelligent management systems to align with international standards in military border service education.

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### KEYWORDS

Associative Reflex, Cadet, Proficiency, Practice

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### CITATION

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## Introduction

Based on the updated population projection for Mongolia, assuming a consistent growth rate of 18-24 year-olds enrolled in bachelor's degree programs based on historical trends, the number of undergraduate students is projected to decrease by 4.0 percent in 2024 compared to the current academic year, and increase by 64.0 percent by 2045. The number of full-time faculty members in higher education institutions has risen by approximately 20.0 percent from the 2023/2024 academic year, but the student-to-faculty ratio has not decreased, aligning with the overall student growth. The analysis reveals an increase in applicants and graduates from the Border Guard School during the 2015-2024 academic period, indicating a significant rise in student numbers in the future. To adequately prepare for this growth, it is crucial to focus on enhancing the learning environment and the education system of the border guard.

The essence of modern education goes beyond simply imparting knowledge; it also focuses on nurturing human creativity, problem-solving abilities, social connections, and technological proficiency. It is characterized by the following key elements:

1. Provision of practical knowledge for life - The knowledge gained, both theoretical and practical, should empower individuals to advance in personal and financial growth throughout their lives. This includes skills such as critical thinking, problem-solving, teamwork, communication, and information literacy, leading to significant personal development.
2. Embracing technological advancements - Utilizing e-learning, interactive educational resources, artificial intelligence, and online platforms within the education system to enhance learning outcomes.
3. Emphasis on lifelong learning - Learning is not confined to formal schooling but is viewed as a continuous process. Therefore, a fundamental aspect of lifelong learning is the belief that individuals can develop and learn at any stage of life.
4. Promoting social equity and inclusivity - Special attention is given to the education of individuals with disabilities and marginalized groups, with the goal of ensuring that education is accessible to all, without discrimination, and with equal opportunities.

The Border Service School, originally established as a secondary school under the "Department of Internal Affairs" in 1933, trains the core officers of the Border Guard Organization, which is vital for Mongolia's national security. The foundation of modern education for the "Border Service" was established at that time, shaping the initial concepts of the ideal education for border guards. In 1942, the Central School was renamed the "Internal and Border Military Joint School," introducing clinical training alongside departmental training and advancing the training format and system significantly. There are:

**Table 1.** Comparative analysis of Course Structure

| Internal and Border Military Joint School /1942/                                     | Border Service School of the University of Internal Affairs /2025/                                                                                                                 |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course Structure                                                                     |                                                                                                                                                                                    |
| Lecture<br>Seminar                                                                   | Lecture<br>Seminar                                                                                                                                                                 |
| Additional course                                                                    |                                                                                                                                                                                    |
| Russian 12 additional types of lessons                                               | 12 additional types of lessons                                                                                                                                                     |
| Extracurricular lessons                                                              |                                                                                                                                                                                    |
| One-month practical training in the 2nd year                                         | Extracurricular lessons<br>Familiarization training in the 1st year<br>Guard chief in the 2nd year<br>Professional training in the 3rd year<br>Office training in the 4th year     |
| Clinical training environment                                                        |                                                                                                                                                                                    |
| The training environment is a field outpost adapted to winter and summer conditions. | There is a training center in the Gunji Golu training center, but the border branch, guard, and control strip suitable for the border service school are not equipped with fences. |
| Supervision tests                                                                    |                                                                                                                                                                                    |
| - If you get a bad grade in the semester exam, you will be expelled                  | - If you get an unsatisfactory grade in 3 subjects, you will be given a year's leave from training                                                                                 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>- If you get a bad grade in the final exam of the year, you will be expelled from the school and become a soldier</li> <li>- If you fail the state exam in your senior year to be a parade leader</li> </ul>                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>- If you get an unsatisfactory grade in 4 subjects, you will be expelled from school</li> <li>- If you miss 42 hours of classes, you will be expelled from school</li> </ul>                                                                                                                                                                                                                                                                                                                                                                        |
| Incentives                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| If you study well for a whole year, you will be promoted to a higher grade                                                                                                                                                                                                                                                                                                                                                                                      | Grade incentives                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Teaching methods                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p>New teachers who studied in the Soviet Union were newly appointed to the school and taught the teachers who were teaching at that time, and the school's teaching methods have changed significantly. These include:</p> <ul style="list-style-type: none"> <li>- Theoretical seminars;</li> <li>- Students giving presentations;</li> <li>- Reviewing, checking, and taking notes;</li> <li>- Military training is mainly carried out in person.</li> </ul> | <p>Mainly completing military courses in person Professional and practical officers who have earned masters and doctoral degrees from universities at home and abroad are using many teaching methods, but classroom training is the main.</p> <ul style="list-style-type: none"> <li>- Theoretical lectures;</li> <li>- Students giving presentations;</li> <li>- Reviewing, checking, and taking notes;</li> <li>- Content-based</li> <li>- Story-based</li> <li>- Case-based</li> <li>- Jigsaw learning</li> <li>- Games and simulations focus on hands-on military training</li> </ul> |

The research indicates that the structure of classes has remained consistent, with new classes emerging in response to prevailing socio-economic and governmental policies. Extracurricular activities have expanded in scope, a clinical training setting is in place, although there is a lack of modern facilities for border guard education. Regular inspections are now carried out for every class and each quarter, but there is a shortage of incentives. Teaching methods and faculty have seen enhancements, yet there has been no integration of contemporary technology.

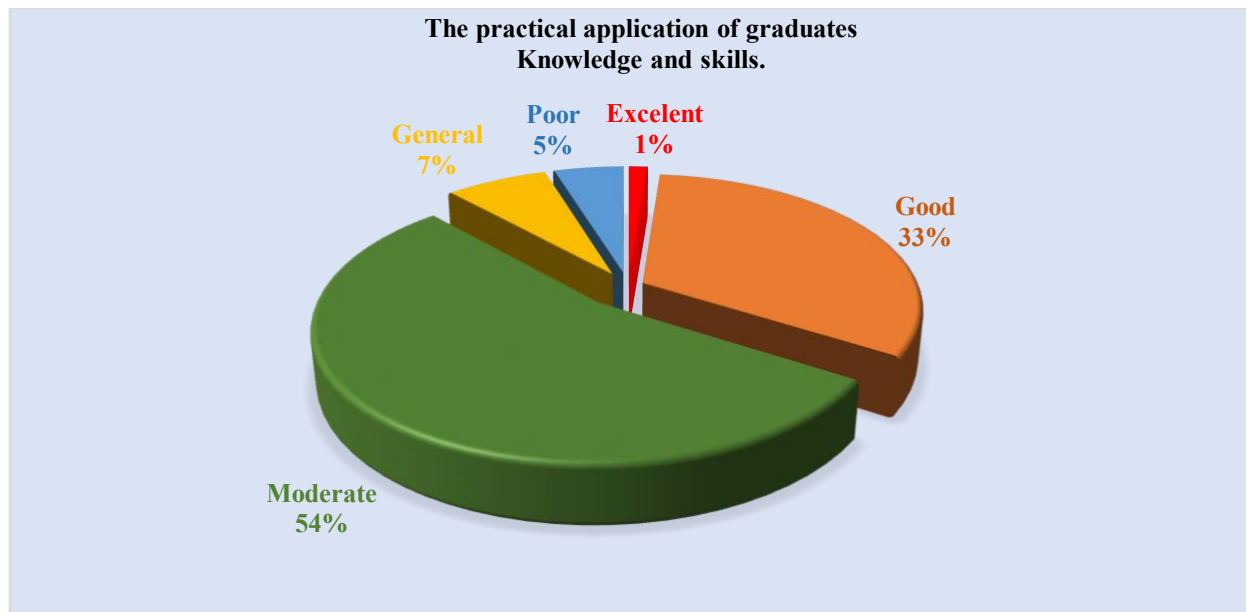
Throughout its history, the school has undergone numerous changes in name and structure, yet its core educational goals and objectives have remained consistent. Research suggests that while our educational environment has seen advancements, there is a perceived lag in the alignment of teaching materials with global trends.

The integration of artificial intelligence and advanced technology in contemporary military training holds promise for revolutionizing the theory and methodology of military instruction. This innovation has the potential to address various challenges, including enhancing military training and readiness, facilitating quicker decision-making, and reducing operational errors.

Artificial intelligence is currently being integrated into educational institutions globally, including military training facilities. This integration presents an opportunity to enhance military simulations and training programs, develop realistic environments for tactical and strategic military training, and enable autonomous drones, mobile robots, and automated systems to operate in secure environments for efficient data collection and analysis. Ultimately, this accelerates the decision-making process.

In an era where the Border Guard General Directorate is enhancing national border protection through a combination of traditional methods and modern technology, it is essential for the curriculum of the Border Service School to incorporate these advancements. Recognizing the importance of this modern approach, I, as the researcher, have structured the curriculum, findings, and implementation into five parts for the study.

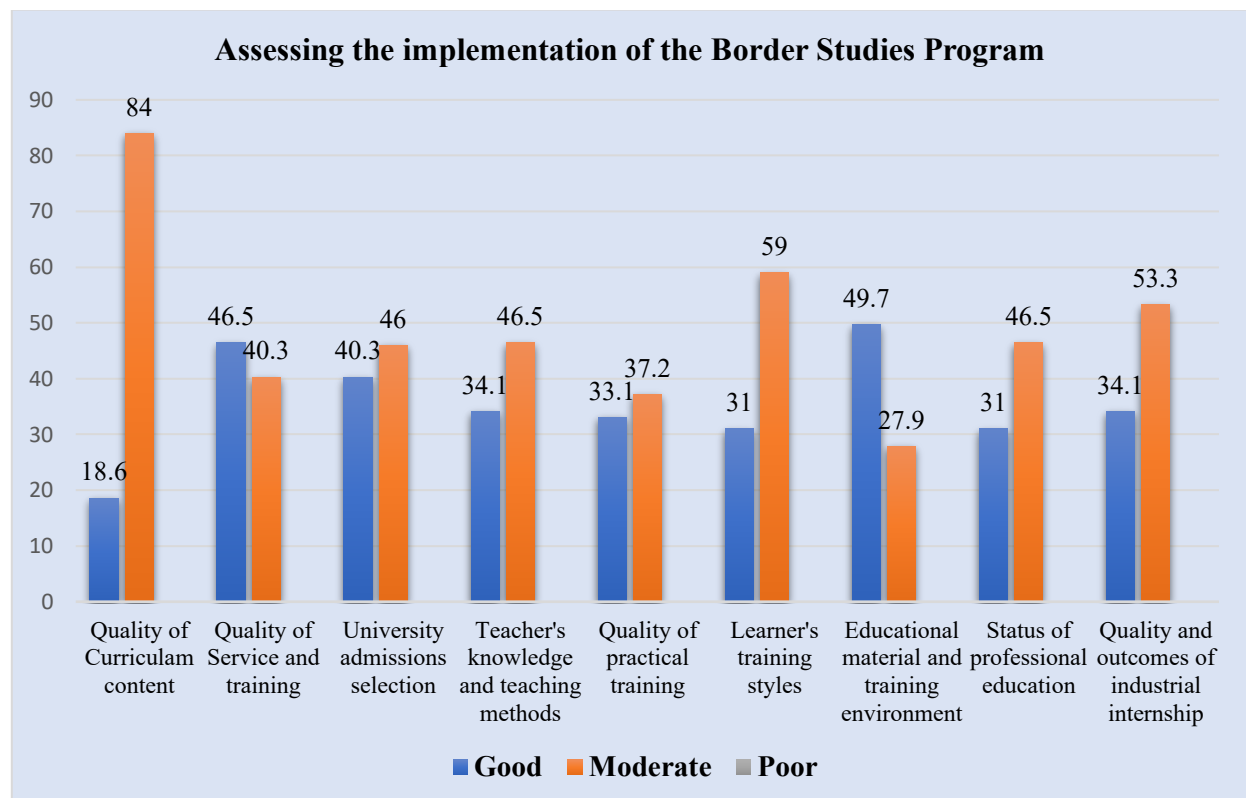
The study analyzed the budgets and documents of the General Directorate of Border Guard, as well as those of the commanders, branch heads, and deputies of the Border Guard units, and the University of Internal Affairs. It evaluated the knowledge and skills of the graduates based on feedback from the commanders of the Border Guard units, who are part of the Border Guard Organization. The results of the evaluation are as follows:



**Fig. 1.** The client organization conducted research on the outcomes of the graduates.

The Mongolian dictionary provides 10 definitions for the term “Moderate,” with the 7th definition in this study referring to “Grades and assessments used in training: average grades (neither good nor bad grades), average learning (not excelling in learning, achieving average results).” This suggests that the graduates of the border service school may not possess sufficient knowledge and skills.

In section 2. The professional programs being taught were evaluated, and the following research results were obtained.



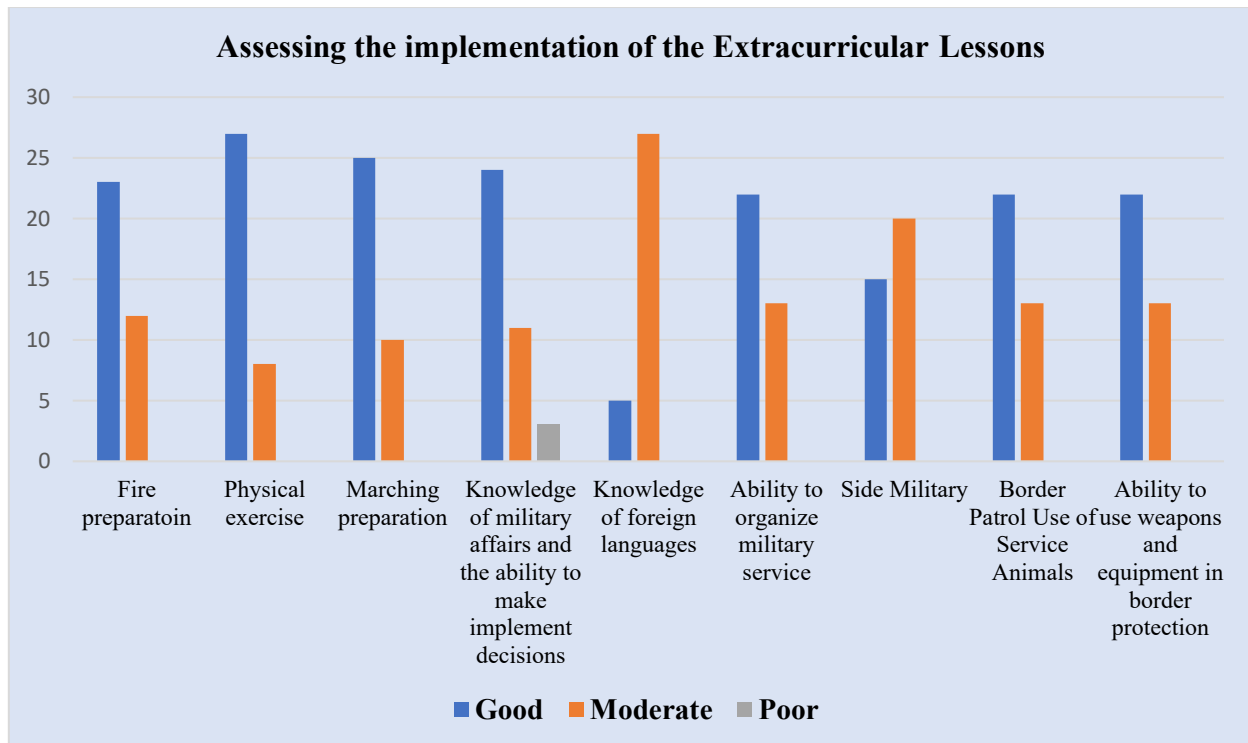
**Fig. 2.** The prioritized results of the study evaluating the outcomes of the program

The study focused on the learning outcomes of the professional program of the client organization. The following aspects were considered:

1. The content and quality of the curriculum.
2. Learning methods.
3. The internship results in the practical organization were deemed unsatisfactory.

Based on the study's findings, it is suggested that the professional program should consist of at least 120 work hours for a bachelor's degree, with 30 hours dedicated to general basic courses as mandated by Section 20.7 of the Higher Education Law. The poor internship results may impact the completion of the internship requirements for the class, given that trainees practice in a practical organization.

In Section 3, the study gathered data from a survey of 94 graduates from the Border Service School who completed professional programs in 2022, 2023, and 2024.



**Fig. 3.** The prioritized results of the study evaluating the outcomes extracurricular lessons

The survey found that users felt confident in their knowledge level, but there was a discrepancy between their self-assessment and the organization's assessment. It is worth investigating whether the training format is ineffective or if graduates lack the practical application of their knowledge.

**Section 4: Environmental conditions** The Border Service School is housed in a 5-story building with a useful area of 4250 square meters, constructed in 1978. Due to the building's age and limitations, it may not adequately support students' learning and practical training needs.

Mongolia's "Vision 2050" long-term development policy includes a specific objective for enhancing the law enforcement sector. The initial phase of this objective, spanning from 2020 to 2030, aims to enhance the integration of advanced scientific technologies into the sector's operations and bolster the research and analysis foundation. As part of this objective, Article 7.4.27 of the Action Plan outlines the goal to enhance the scientific and innovative capacities of the University of Internal Affairs.

Therefore, the Border Service School, a part of the University of Internal Affairs, aims to establish a new Border Service School complex to enhance the resources and skills of Border Guard officers to meet international standards. The school's vision is to not only protect

Mongolian values but also produce professional personnel with national values, principles, and ethics. Graduates will respect national culture, history, and traditions, contributing to a just and peaceful society. They will be proud of Mongolia's values, actively work towards the country's future well-being, and prioritize policies and actions that ensure national security.

Section 5: In the Russian Federation, the teaching methods of similar vocational schools in neighboring countries are compared, and the following categories of concepts based on pedagogical technologies are considered to be the most effective in training military personnel.

**Table 2.** Comparison of Course Training

|                                                       |                                                              |                                                                      |
|-------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------|
| Border Guard Institute in Kurgan, Kaliningrad, Russia | Army Academy of Border and Coastal Defense in Kunming, China | Border Service School of the Internal Affairs University of Mongolia |
| Traditional training-Artificial intelligence          | Traditional training-Artificial intelligence                 | Traditional training                                                 |
| Associative-reflex                                    | Associative-reflex                                           | -                                                                    |
| Programmed training                                   | Programmed training                                          | Programmed training                                                  |
| Practice-based training                               | Practice-based training                                      | Practice-based training                                              |
| -                                                     | Use of modern teaching technology                            | -                                                                    |

It is evident that neighboring countries predominantly employ the associative-reflex method in their training practices, integrating traditional teaching methods with artificial intelligence and technology. Our educational system is on track to align with the advancements of the modern era. Consequently, our client organization is leveraging cutting-edge technology and programs, and it is imperative that we deliver our final product in accordance with contemporary standards.

**Table 3.** The Internal environment analysis

|                               |                                                                                                                                                                                                                                                                                                                    |                               |                                                                                                                                                                                                                                                                                               |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Internal environment analysis | <b>Advantages</b><br>The program's activities are aligned with the school's mission and the comprehensive competency-based program focused on curriculum outcomes was updated in 2018, 2020, 2022, and 2024, based on research from institutions and alumni, as well as updated legal and regulatory requirements. | External environment analysis | <b>Opportunity</b><br>If we can completely abandon the traditional teaching style and organize teaching methods in line with modern techniques and programs, the learning style of the students, the teacher development program, and the development of the curriculum will improve.         |
|                               | <b>Weakness</b><br>Lack of training environment, lack of modern technology and software in training, uneven development of curricula, and changes in curriculum that are updated every year but do not change the basic content.                                                                                   |                               | <b>Risk</b><br>The teaching methodology is not in line with modern teaching methods, and if it is not updated and adapted to the product, the teaching activities will fail in the future, the teaching environment will lag behind the students and the students will lose their enrollment. |

### Conclusions

In summary, the studies indicate that the Border Service School lacks adequate learning resources and environment. The military professional book library needs modern technical equipment and artificial intelligence programs. Some countries have improved training by combining traditional methods with AI and modern technologies. It is essential for us to adopt these advancements to enhance training outcomes and provide high-quality personnel to client organizations.

Comparing training systems in Russia and China, the associative-reflex method with modern technology produces more competent graduates. Survey results from the 2022–2024 cohorts show a gap between self-assessed confidence levels and evaluations by commanding officers, suggesting a need to improve translating theoretical knowledge into practical skills. The aging infrastructure of the Border Service School limits the implementation of modern training technologies.

In line with Mongolia's "Vision 2050" development policy, which emphasizes integrating advanced technologies into law enforcement, this study proposes a modernization strategy. Establishing smart classrooms, virtual labs, augmented reality training, and cloud-based management systems is crucial for border



service education. These innovations, along with associative-reflex training, will prepare graduates for the challenges of modern border protection. Implementing these recommendations will enhance Mongolia's national security by ensuring officers meet international standards and can address evolving security threats effectively.

#### **Recommendation:**

To improve the learning outcomes of Border Service School students through outcome-based training, the following recommendations are proposed:

1. Implementation of smart classrooms: Introduce a smart training system using cloud-based software to facilitate training in conjunction with weapon jets and training campuses. Create a modern intelligent environment with technologies like "Apple Vision Pro" and "4D Simulator Arcade" to enable customized training for individuals, special groups, border guards, and sectors based on students' needs, interests, and proficiency levels.

2. Incorporation of associative-reflex-based training methods: Integrate military lessons, self-defense, and field trips as military games in various time scenarios to develop reflexes that can be applied in new situations based on past experiences. Practice behavioral patterns that adapt to changing circumstances.

3. Establishment of virtual laboratories: Utilize cloud technology and advancements in cloud computing to set up a virtual laboratory for simulating border search and daily protection scenarios. This virtual environment should support individual and team work, enabling simulations of Border Guard units, tactical operations rooms, and military logistics. Ensure that the virtual laboratory maintains confidentiality and can be accessed by students at home, school, and in the field.

4. Creation of virtual content: Teachers in the vocational department of the border service school will have access to cloud technology to acquire desired content, customize it to their needs, and incorporate their own creations. By sharing content among themselves, the quality and dissemination will be greatly enhanced, enabling schools to utilize high-quality teaching materials.

5. Introduction of an artificial reality environment: After experiencing virtual training labs, students will progress to working in an artificial reality setting. This technology combines real-world elements with a virtual environment for students. For example, students enrolled in the "Special Forces Tactics" course will be equipped with "Vision Pro" glasses, Bluetooth-enabled firearms, and internet-connected equipment, and placed in a virtual environment. Real-time computer-generated inputs such as sound, images, video, lasers, and smoke screens enrich the actual environment. Failure to sense the environment or one's surroundings will result in task failure. This environment can also be used for semester exams or grade advancement tests.

6. The new Border Service School building is equipped with virtual environments, cloud computing, fiber optic cables supporting artificial intelligence, high-speed 5G networks, secure network infrastructure and software for safeguarding confidentiality, and skilled IT and network professionals.

7. Implementation of intelligent management: Utilize cloud computing to manage class schedules, training programs, and human resources, assess the performance of teachers and staff, and integrate the school's electronic program with artificial intelligence for resource management.

Specialized training for professional officers, supervisors, contract personnel, and conscripted military personnel is essential for robust border security. Graduates from the school should be able to effectively implement border and border control measures to ensure lasting peace for citizens. Enhancing the training environment and materials will prepare future graduates to contribute effectively to internal security in Mongolia and prevent border violations.

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