Disaster management competencies and skills among B.Ed. students, a comprehensive study

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ABSTRACT:

Disaster management plays a crucial role in education especially among B.Ed. students, contributing to both their personal development and societal well-being. B.Ed students learn to raise awareness about disaster risks and preparedness strategies among school communities. This research paper titled "Disaster Management Competencies and Skills among B.Ed. students, a Comprehensive study**"** imparts knowledge on evacuation plans and safety measures during emergencies and incorporating disaster management into the curriculum ensures that B.Ed students are equipped to teach future generations about coping mechanisms and resilience in the face of disasters. Disaster management education fosters leadership and coordination skills among B.Ed students. They learn to organize and lead drills, ensuring the smooth execution of emergency plans in educational institutions and B.Ed students are encouraged to engage with local communities to create a network of support during disasters. This involvement enhances their understanding of community needs and facilitates effective response efforts. B.Ed students should gain a deep understanding of different types of disasters, their causes, and effects and the students should develop practical skills in first aid, evacuation procedures, and communication and they also learn how to engage with local communities to create disaster awareness and effects. The understanding psychological impact of disasters on students is essential. They should be trained to overcome the disasters and incorporating disaster management into the curriculum is crucial. B.Ed students should learn how to integrate disaster management and education .This study goes through the skills of disaster management like prevention, preparedness, response and recovery.

Keywords: disaster, evacuation, risk, safety management, mitigation.

Introduction

The integration of disaster management into education connects the environment with the educational aspects and fundamentally on how students act and how teachers instruct them. The use of disaster management in education is become a revolutionary trend in now a day, it opened new opportunities and practical knowledge in the learning environment. A disaster is a dangerous event that affects the proper functioning of a society or community and negatively affects human, material, environmental, and economic areas. Preparedness, response, recovery, and mitigation are the four stages of disaster management. The first two stages, known as

preparation and mitigation, take place ahead of an emergency and enable accurate projections of its effects. Both the reaction and recovery stages last until the instant following the calamity before regular operations and activities are once more carried out to a high standard. The planning and preparation stages play a critical role in determining how quickly and efficiently the response and recovery phases unfold.

Disasters have an impact on education in several ways, including disrupting regular lessons, destroying infrastructure, and causing disruptions to school activities. Education establishments nowadays understand the need to be ready for emergencies and the risks that go along with them, and students are more knowledgeable about catastrophes thanks to media, seminars, and personal experience. While disaster preparedness refers to the steps taken to prepare for or lessen the effects of disasters, disaster awareness refers to the degree of knowledge about disaster risks and how factors that cause disasters influence the actions that could be taken individually or collectively to address exposure and vulnerability to hazards. But even with the increased awareness, many educational institutions continue to lack proper preparation, reaction, and mitigation plans. While raising awareness is vital, it's also critical to equip children with the fundamental rescue skills that can greatly lessen the impact of disasters. For this reason, the relevance of these rescue processes is greater in the Bed course. They are a vital component of disaster education and should only be taught by qualified specialists. Both industrialized and developing nations have experienced disasters. Although most people are aware of the interruptions that natural disasters bring, many are unaware of the detrimental effects they have on kids.

Defining Disaster

According to World Health Organization (WHO), "A disaster can be defined as any occurrence that causes damage, ecological disruption, loss of human life or deterioration of health and health services on a scale sufficient to warrant an extra ordinary response from outside the affected community or area."

Disaster types include the following:

Earthquakes

Tornadoes

Hurricanes

Pandemics

Volcano eruptions

Wildfires

Floods

Mass shootings

Acts of terror

Nuclear explosions

Chemical emergencies

Natural Disasters: These are the risks that result from the forces of nature. The most frequent natural catastrophes known to humankind are heat waves, earthquakes, volcanic eruptions, floods, droughts, squalls, lightning, extremely heavy snowfall, extremely heavy rain, cyclones, and squalls. These events can inflict damage to property and even fatalities.

Man-made Disasters: These are the risks brought about by people or their actions. Human activity can result in various hazards, including but not limited to industrial and chemical accidents, road and railway mishaps, aviation tragedies, collapsed buildings, communal violence, bomb blasts, explosions, fires, accidents, spills, building collapses, electricity failure, chemical and nuclear radiation, bomb blasts, terrorism, war, insurgency etc. Several disasters can be linked to human activities like industrialization, deforestation, and the rise of urbanization which inevitable result in air and water pollution. These factors then lead to climate change, global warming, glacier and ozone layer depletion, increased UV radiation, avalanches, flash floods, and water-logging in low-lying areas.

Interruption Management

Disaster management pertains to the systematic arrangement and guidance of resources for the purpose of addressing a disaster, along with the synchronization of the functions and obligations of responders, commercial and governmental entities, volunteers, faith-based and nonprofit groups, contributions, and so forth. Reducing the impact of an incident is the chief objective of the disaster management leader, and it entails mitigation, response, recovery, and readiness.

The Crisis Management Cycle's Five Phases

The disaster-management cycle can mitigate the effects of a catastrophic incident when it is appropriately put into practice. For a thorough, quick recovery, it can also include the emergency protocols and procedures required. Five stages are involved in the cycle:

1. Preventative

Being proactive is the greatest way to deal with a calamity. To do this, evaluate potential risks and create mitigation strategies. While this phase of the cycle entails implementing long-term strategies to reduce the likelihood of disasters, it's critical to recognize that catastrophes are not always avoidable.

Prevention involves scenarios such as the following:

- Implementing an evacuation plan in a school, for example, showing teachers how to lead students to safety in the event of a tornado or fire
- Planning and designing a city in a way that minimizes the risk of flooding, for example, with the use of locks, dams or channels to divert water away from populous areas

2. Mitigation

Mitigation aims to minimize the loss of human life that would result from a disaster. Both structural and nonstructural measures may be taken.

- A structural measure means changing the physical characteristics of a building or an environment to curb the effects of a disaster. For example, clearing trees away from a house can ensure that dangerous storms don't knock down the trees and send them crashing into homes and public buildings.
- Nonstructural measures involve adopting or amending building codes to optimize safety for all future building construction.
- The goal of mitigation is to reduce the number of lives lost in the event of a disaster. It is possible to take both structural and nonstructural actions.
- A structural measure is modifying a buildings or environments physical attributes in order to lessen the impact of a disaster.
- To prevent dangerous storms from toppling trees and sending them crashing into homes and public buildings, for instance, trees can be cleared away from houses. Adopting or revising building codes is one example of a nonstructural strategy that maximizes safety for all future building development.

3. Preparedness

Being prepared is a continuous process that helps people, communities, companies, and organizations make plans and practice plans for what to do in case of an emergency. Continuous training, evaluation, and corrective action to maintain the highest degree of readiness are the hallmarks of preparedness. The readiness stage includes exercises including active shooter drills, fire drills, and evacuation rehearsals.

4. Response

What happens after a tragedy occurs is called a response. Both immediate and long-term reactions are involved. The disaster-management leader will coordinate the use of resources (including personnel, supplies and equipment) to help restore personal and environmental safety, as well as to minimize the risk of any additional property damage.

5. Recovery

Recovery is the fifth phase of the disaster-management cycle. This may require several years or even decades to complete. It entails bringing the region under control and resuming all necessary communal operations. Prioritization is necessary for recovery: less-essential services will be

restored later, with food, clean water, utilities, transportation, and healthcare being restored first. Helping people, communities, businesses, and organizations return to normal or a new normal, depending on the impact of the disaster is ultimately the goal of this stage.

Acquiring Knowledge in Disaster Management

Teachers of crisis management need to master certain essential skills in order to effectively coordinate this cycle. The following abilities are required at each cycle stage:

Developing Skills for Disaster Management

Developing skills for disaster management is crucial for individuals and organizations alike, as it enables effective response and mitigation in times of crisis. Here are some essential skills to focus on:

1. **Risk Assessment**: Learn how to assess potential risks in your area, considering factors such as geography, climate, infrastructure, and population density. Understanding the specific hazards, you may face is the first step in effective disaster management.

2. **Emergency Planning**: Develop skills in creating emergency plans for various scenarios, including natural disasters like earthquakes, floods, hurricanes, as well as human-made disasters such as industrial accidents or terrorist attacks. This involves identifying evacuation routes, establishing communication protocols, and designating roles and responsibilities.

3. **Communication**: Effective communication is critical during emergencies. Practice clear and concise communication methods, both verbal and written, to disseminate information to the public, emergency responders, and relevant authorities. This includes using different communication channels such as social media, emergency broadcasts, and community networks.

4. **Leadership and Decision Making**: Develop leadership skills to coordinate response efforts and make quick, informed decisions under pressure. This involves staying calm, prioritizing tasks, and mobilizing resources efficiently to minimize the impact of disasters.

5. **First Aid and Medical Skills**: Gain basic first aid and medical skills to provide immediate assistance to those injured during emergencies. Training in CPR, wound care, and triage can make a significant difference in saving lives until professional help arrives.

6. **Logistics and Resource Management**: Learn how to manage resources effectively during emergencies, including food, water, shelter, and medical supplies. This includes

inventory management, distribution logistics, and coordinating with relief organizations and government agencies.

7. **Community Engagement**: Engage with your local community to raise awareness about disaster preparedness and foster collaboration among residents, businesses, and government agencies. Encourage participation in drills, training exercises, and volunteer programs to build a resilient community.

8. **Technology and Innovation**: Stay updated on the latest technologies and innovations in disaster management, such as early warning systems, GIS mapping, drones for aerial surveillance, and mobile apps for emergency communication and resource tracking.

9. **Psychological Resilience**: Develop skills to provide psychological support and counselling to individuals affected by disasters. Recognize the signs of trauma and stress, and learn techniques for coping and resilience-building for yourself and others.

10. **Continuous Learning and Adaptation**: Disaster management is an evolving field, so commit to continuous learning and adaptation. Stay informed about emerging threats, best practices, and lessons learned from past disasters to improve preparedness and response efforts.

Becoming a teacher Leader in Disaster Management

Some teachers have more experience than others with handling disasters; ultimately, though, this is a field in which every business or community leader should hone their skills. Any organization or municipality can be hit with a disaster sooner or later, whether that's something as minor as a temporary power outage or as threatening as a hurricane, earthquake, bomb threat or active shooter.

The COVID-19 pandemic has brought this home, as many business owners have confronted the crisis at hand. To ensure the safety of customers as well as employees, business leaders have shifted to remote work environments, implemented new communication infrastructures, and embraced new standards of office hygiene and sanitization. While no business leader could have precisely predicted the effects of the coronavirus, those companies that had some disaster plan in place are likely a step or two ahead of others.

Those looking for a career solely focused on mastering the disaster-management cycle have many opportunities to do so; some examples of jobs in this field include crisis-management lead, disaster-assistance specialist and emergency-planning coordinator. These roles all call for various levels of responsibility in preparing a company or a city for cataclysmic events. To find work in any of these positions, as well as to sharpen all the skills needed for success, earning a master's degree in emergency and crisis management can be a big step forward.

Educational implications

Fostering disaster management competencies among bed students has crucial educational implications:

- Disaster management through B.Ed education is vital to mitigate distress caused by disasters
- Impact of Education on Disaster Risk Reduction: Teacher educators play a crucial role in disaster risk reduction, affecting preparedness and response strategies
- Interdisciplinary Education in Disaster Risk Reduction: Interdisciplinary nature of B.Ed education, as seen in the Course, proves essential in disaster risk reduction.
- Reducing Vulnerability: Education on disasters empowers teacher trainees to take actions to reduce vulnerability.
- Improved Preparedness: practicing disaster management drills among teacher educators enhance preparedness, ensuring a more effective response during emergencies.
- Academic Performance: Introducing disaster management in the curriculum can mitigate the negative impact on attendance and academic performance during disasters by the teachers.
- Disaster education among B.Ed is a functional and cost-effective tool for risk management, providing practical benefits.
- Disaster management is crucial in schools, where practiced drills enhance preparedness and safety.
- Integrating disaster management into education helps youth anticipate, absorb, and adapt to events, emphasizing its importance in the curriculum.

In summary, disaster education is integral, serving as a practical tool and enhancing preparedness, making it crucial in both schools and broader educational contexts. integrating disaster management education in B.Ed not only enhances safety but also contributes to overall resilience and well-being.

Implementation challenges of disaster management in B.Ed programs include:

- **Limited Curriculum Integration**: B.Ed programs may face challenges in effectively integrating comprehensive disaster management education into their curriculum, potentially resulting in inadequate coverage of essential topics.
- **Teacher Preparedness**: Ensuring that teachers are well-prepared to deliver disaster management education poses a challenge. Issues such as the newness of disaster nursing specialties and a lack of formal preparedness can hinder effective teaching.
- **School Preparedness**: Challenges exist in implementing disaster risk reduction measures in schools. This includes issues related to school preparedness and emergency management, which are critical aspects of comprehensive disaster education.

- **Adaptation to Local Contexts**: B.Ed programs may struggle to tailor disaster management education to the specific needs and contexts of local communities, impacting the effectiveness of preparedness efforts
- **Resource Constraints**: Limited resources, both financial and educational, can impede the implementation of practical and resource-intensive aspects of disaster management education.
- **Continuous Training Needs**: Addressing the dynamic nature of disaster management requires ongoing teacher training to stay abreast of emerging challenges and best practices in the field.

Addressing these challenges is crucial for ensuring that B.Ed programs effectively equip future educators with the knowledge and skills needed for disaster management in educational settings.

Recommendations

To foster disaster management competencies among Bed students, a comprehensive study suggests the following recommendations:

- **Integrate Disaster Management in Education:**
  Include disaster management in the curriculum of Bed programs, ensuring a comprehensive understanding of preparedness and response strategies.
- **Assess Competencies Needed:**
  Conduct surveys to identify specific competencies required by Bed students, aligning the curriculum with the real needs of future educators.
- **Incorporate Practical Training:**
  Develop competency-based training programs, emphasizing practical skills and experiences, as demonstrated in nursing education.
- **Promote Interdisciplinary Learning**:
  Encourage interdisciplinary collaboration and learning to enhance the overall disaster management competencies among Bed students.
- **Utilize Technology**:
  Leverage information technology to enhance disaster management, as recommended in studies advocating for IT integration in disaster response.
  These recommendations ensure a holistic approach to disaster management education for Bed students, aligning theoretical knowledge with practical skills and emerging technological advancement

Conclusion

In this study it is seen that training increases disaster prevention and mitigation capabilities among students. This increase is due to the seriousness of the trainees in following the material because the material is new and interesting. In order to better understand the process of disaster

mitigation, this is in line with the study concluding that children attending disaster mitigation training in early childhood through their teachers will able to understand the process of disaster mitigation and its application. Training methods more effectively improve students' disaster prevention and mitigation capabilities compared with educational video screening and controls. This is consistent with research which concludes that students' understanding and resilience taught by disaster mitigation learning models is better than the understanding of students taught by conventional learning models.In conclusion, integrating disaster management into B.Ed programs is vital for fostering competencies, aligning with broader efforts to enhance disaster resilience through education.

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