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 level 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. Disaster preparedness refers to the steps taken to prepare for or lessen the effects of disasters. However, despite more awareness, many educational institutions still do not have adequate strategies for mitigation, response, or readiness. While bringing up 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 B.Ed. 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."

various forms of disasters are the following:

- Tremors and Tornadoes
- Hurricanes
- Epidemics
- eruptions of volcanoes
- conflagrations
- Floods
- large-scale gunshots
- Terrifying acts

- explosions caused by nuclear power
- Chemical mishaps

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 dangers that result from human behaviour or decisions. Many risks can arise from human activity, such as those related to industry and chemicals, transportation, railroads, aviation, collapsed buildings, violence in communities, bomb blasts, explosions, fires, accidents, spills, building collapses, power outages, bomb blasts, terrorism, war, insurgency, etc. Human activities like industrialization, deforestation, and increased urbanization—all of which inevitably lead to air and water pollution—have been connected to a number of disasters. Subsequently, these elements cause avalanches, flash floods, water-logging in low-lying places, increased UV radiation, global warming, glacier and ozone layer loss, and climate change.

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

- 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 building's or environment's physical attributes in order to lessen the impact of a disaster. To prevent hazardous storms from toppling trees and sending them crashing into residences and public buildings, for instance, trees should be removed from close proximity to houses.
- Adopting or changing building codes are examples of nonstructural strategies that maximize safety in all upcoming building construction.
- Reducing the number of lives lost in the case of a disaster is the aim of mitigation. Both structural and nonstructural actions are feasible.
- A structural measure involves altering a structure 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 an ongoing activity that aids individuals, groups, businesses, and organisations in creating and rehearsing emergency plans. The hallmarks of preparedness are ongoing training, assessment, and remedial action to maintain the highest level of readiness. Exercises like fire drills, evacuation rehearsals, and active shooter drills are part of the readiness stage.

4. Response

A response is what takes place following a disaster. There are both short-term and long-term responses at play. The leader in charge of disaster management will oversee the allocation of resources, such as manpower, supplies, and equipment, with the goal of restoring environmental and public safety while reducing the possibility of further property damage.

5. Recovery

The fifth stage of the disaster-management cycle is recovery. It can take a few years or even decades to finish this. It means taking control of the area and starting up the required community activities again. Recovery requires prioritisation: food, clean water, utilities, transportation, and healthcare should be restored first, with less crucial services coming back later. The ultimate objective of this stage is to assist individuals, groups, companies, and organisations in returning to either a pre-disaster or a new normal, depending on the extent of the damage.

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

While some educators have dealt with disasters more skilfully than others, disaster management is a field in which all corporate and community leaders should become proficient. A disaster of any size, from something as simple as a brief power loss to something as dangerous as a hurricane, earthquake, bomb threat, or active shooter, can eventually affect any organisation or town.
This has been made clear by the COVID-19 pandemic, as numerous business owners have had to deal with the current situation. Business executives have adopted new norms of workplace hygiene and sanitization, moved to remote work settings, and installed new communication infrastructures in order to guarantee the safety of both clients and staff. Although no company executive could have accurately forecast the effects of the coronavirus, those companies that had some disaster plan in place are likely a step or two ahead of others.

There are plenty of options for those who want to devote their entire career to learning the disaster-management cycle. Roles in this profession include emergency-planning coordinator, crisis-management lead, and disaster aid specialist. Each of these positions entails varying degrees of accountability for a company's or city's preparation for catastrophic disasters. Obtaining a master's degree in emergency and crisis management can be a significant step towards finding employment in any of these roles and honing all the success-related abilities.

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

This study shows that students' capacities for catastrophe mitigation and prevention enhance with training. The fact that the material is fresh and engaging is what accounts for this rise in trainees' commitment to learning. This is in keeping with the study's conclusion that young children who receive disaster mitigation training from their teachers would be able to comprehend the process of disaster mitigation and its application as well as how to better understand it. When it comes to improving students' capacity to prevent and mitigate disasters, training methods outperform educational video screening and controls. This is in line with studies that show students' resilience and comprehension of disaster mitigation learning models are superior to those of students taught by traditional learning models. Finally, it should be noted that the inclusion of disaster management in B.Ed. programmes is essential for developing capabilities and for supporting larger initiatives to improve disaster resilience through education.

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