Electronic Module Design of Civic Education for the Development of Dharma Agama and Dharma Negara

I Putu Windu Mertha Sujana
Universitas Pendidikan Ganesha, Bali, Indonesia
windu.mertha@undiksha.ac.id

Abstract. This study aims to produce an electronic module design for Civic Education in the context of fostering dharma agama and dharma negara in higher education based on Hindu spiritual culture as a distance learning medium. In order to achieve this goal, research method used in this study was carried out using Borg and Gall design research and development scheme which was carried out until the third step. The first step is to conduct research and collect various information data through interviews, observations, documentation studies, and distributing questionnaires in research locations which are Universitas Pendidikan Ganesha and Universitas Dwijendra. The second step is planning stage, which includes the formulation of the module framework and determining appropriate sub-topics accompanied by relevant materials, namely the “Citizens’ Rights and Duties”. The third step is the development of the initial design of the Civic Education electronic module in the context of fostering dharma agama and dharma negara. The findings of this study are to produce a Civic Education electronic module design which is classified as an interactive teaching material that has been integrated with life values originating from Hindu spiritual cultural values (Living Values Education). The framework for the design of the electronic module for Civic Education in the context of fostering dharma agama and dharma negara contains the following sections: 1) introduction; 2) keywords; 3) mapping concept; 4) material; 5) living values; 6) conclusion; 7) reflection; and 8) references.

Keywords: Civic Education Electronic Module · Dharma Agama · Dharma Negara · Higher Education

1 Introduction

The position and role of civic education which is so important is also felt by the Indonesian state. Civic education is a course in order to provide an understanding of Pancasila, the 1945 Constitution, politics, law, moral values, local wisdom, the Unitary State of the Republic of Indonesia, and diversity in culture and its implementation in shaping students to become citizens who have a sense of nationality and love for the homeland. Civic education has proven to be effective in shaping the political abilities of students (young citizens) with a democratic and responsible spirit [1].
The position and role of civic education which is so important for the survival of the Indonesian society, nation and state, is not directly proportional to the reality of civic education practice in formal educational institutions with what is happening in society. First, the practice of centralized education policies has partly made the nationalism built into education policies tend to make the practice of civic education only transfer the spirit of state nationalism [2] and reduce the practice of democratic values for students [3]. The policy of standardized civics education learning materials has degraded the creativity of educators and students in learning civic education, as a result, civics education learning materials are dry from the touch of local wisdom that applies in the community. This makes students tend to have learning difficulties, because national materials tend to be out of reach for the minds and beliefs of students.

The second problem is that the Civic Education learning media used by lecturers have not adapted to the characteristics of the digital native generation. The learning media used by Civic Education lecturers are still conventional, such as using only printed books or printed modules. While learning that is intended for students belonging to the digital native generation, it is necessary that the Civic Education learning media be adapted to the characteristics of students, namely digital-based. Students who are studying today are the generation born after 1980 and categorized as digital native generation (DNG) [4], millennial [5], or the net generation [6]. Students who are categorized as digital native generation (DNG) are a generation that cannot be separated from digital technology every day. Ali and Lilik [7] revealed that this generation has characteristics such as: (1) Confidence, has high self-confidence and dares to give opinions in public; (2) creative, having out of the box thinking, rich in innovation, and able to convey the innovation appropriately; and (3) connected, having the ability to socialize in their community and active in cyberspace. The majority of educators currently born before 1980 are categorized as digital immigrant generation (DIG) [4]. The digital native generation (DNG) has a different way of thinking, study habits and language than the digital immigrant generation (DIG). Digital native generation (DNG) students have the habit of learning in a fun and flexible way (such as studying while listening to music, watching television, and also chatting with friends), but digital immigrant generation (DIG) educators view learning in this way will not succeed because digital immigrant generation (DIG) educators cannot learn like that [4]. Different patterns of thinking and study habits have shown cultural differences between the two generations in the learning process they experience. Being a professional educator in the 21st century, of course, cannot impose learning models, learning methods, and teaching materials used in accordance with the wishes of the educators, but must be adapted to the characteristics of their students.

The third problem is that the Civics Education teaching materials are poor with the spiritual cultural values of the community. Civic Education teaching materials in general teach students more about the relationship between citizens and the state with a secular pattern. So that state affairs and religious affairs are considered separate, this indicates that civics education teaching materials are poor in values derived from local wisdom, cultural, spiritual-religious communities. This is reinforced by the results of Sukadi’s research [3] which states that learning practices in Bali are characterized by the following: (1) socio-cultural values and moral values are very lacking to be synergized in the world of education, especially Civic Education; (2) The lesson plan and syllabus for Civic
Education (which contains methods, materials, media, evaluations, and references) do not synergize spiritual-religious values; and (3) the teaching and learning process in the classroom seems to only emphasize low-level physical and cognitive activities as well as a little touch of mental activity that comes from morality, spirituality, and religion; (4) Civics education teaching materials teach students more about the relationship between citizens and the state (secular pattern) so that state affairs and religious affairs are considered separate, this explains that civic education teaching materials are poor in values sourced on local wisdom, cultural, spiritual-religious society. (5) Learning innovations that have been used during the Civic Education learning process are not guaranteed for sustainability, this is because educators feel foreign to their profession due to the lack of local wisdom based on the local community.

Civic Education Learning which took place in Bali showed the dominance and hegemony of national education practices that seemed to override holistic-humanist-religious values, as a result of the mastery of education by the market ideology of capitalism which seemed to lead to rationalism-empirical or rationalistic-materialistic ways of thinking. The spirit of education based on moral and spiritual values shows signs of secularization. This shows that our national education world is like the world of a secular state which seems to separate religious ideology from the ideology of science [3]. Overcoming these problems requires a strategy in developing Civics learning practices at the higher education level. Changes in teaching and learning paradigms and technological developments have led to the role that educators must carry out during the learning process to be expected to understand and clearly know the development of their students, so that educators can use innovative approaches in the learning process [8]. Therefore, Civics learning in addition to utilizing technology also requires holistic-humanist-religious and integrated thinking.

Based on the thoughts and real conditions that have occurred, have inspired researchers to carry out research at the higher education level in Bali. The focus of this research will be to produce an electronic Civic Education module design based on spiritual culture for the younger generation of Hindus in the context of fostering dharma agama and dharma negara. This aims to restore the strategic position of Civic Education to become an important and beneficial subject for the interests of the Indonesian nation and state in presenting smart and good citizens in the midst of society.

2 Research Method

The research method used in this research is to use the research design and development of the Borg and Gall scheme which is carried out until the third step. The first step is conducting research and collecting data on various information through interviews, observations, documentation studies, and distributing questionnaires with research locations at Universitas Pendidikan Ganesha and Universitas Dwijendra. The second step is the planning stage, which includes the formulation of the module framework and determining the appropriate sub-topics accompanied by relevant materials, namely the material on the rights and obligations of citizens. The third step is the development of the initial design of the Civic Education electronic module in the context of fostering dharma agama and dharma negara.
The selected subjects were determined based on purposive sampling technique. The informant data used as subjects in this study are described in the following Table 1.

The principle used in data collection later is the principle of the human instrument. Even though the principle of this human instrument has stated that the researcher is the main instrument in research, researchers are allowed to use other instruments such as questionnaires as long as the instrument is made by the researcher himself. Researchers use a human-to-human approach, meaning that during the research process the researcher will make more contact with the local community around the research location. This results in researchers having the flexibility to explore and find detailed information and data related to what they want to study. Data collection techniques used by researchers, namely semi-structured interview techniques (semi-structured interviews), participatory observation techniques, and documentation study techniques. Researchers used interactive model data analysis consisting of data reduction, data presentation, and drawing conclusions [9].

3 Research Results

The learning media used in the Civic Education learning process also has a large enough contribution to the success of the learning. The learning media used by Civic Education lecturers when teaching is the main focus that must be updated and adapted to the characteristics of the students. Based on the results of the questionnaire distributed to 86 respondents (students from Universitas Pendidikan Ganesha and Universitas Dwijendra) regarding what things should be updated in the learning process for Civic Education courses at the higher education level, 60 students (69.8%) stated that if the learning media used by the lecturer needs to be updated and of course adapted to the characteristics of students. In more detail, the results of the questionnaire can be seen in Fig. 1.

<table>
<thead>
<tr>
<th>No</th>
<th>Capacity in Research</th>
<th>Initials</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hindu Religion Practitioner</td>
<td>WS</td>
<td>1 person</td>
</tr>
<tr>
<td>2</td>
<td>Balinese Culture Practitioner</td>
<td>KS</td>
<td>1 person</td>
</tr>
<tr>
<td>3</td>
<td>Civic Education Practitioner</td>
<td>SS &amp; KR</td>
<td>2 person</td>
</tr>
<tr>
<td>4</td>
<td>Head of Universitas Pendidikan Ganesha</td>
<td>RD</td>
<td>1 person</td>
</tr>
<tr>
<td>5</td>
<td>Lecturer of Civic Education, Universitas Pendidikan Ganesha</td>
<td>NS, MSH, MJS, WB</td>
<td>4 person</td>
</tr>
<tr>
<td>6</td>
<td>Head of Universitas Dwijendra</td>
<td>GS</td>
<td>1 person</td>
</tr>
<tr>
<td>7</td>
<td>Lecturer of Civic Education, Universitas Dwijendra</td>
<td>MK, MS, RAM, WES</td>
<td>4 person</td>
</tr>
<tr>
<td>8</td>
<td>Student of Universitas Pendidikan Ganesha</td>
<td></td>
<td>43 people</td>
</tr>
<tr>
<td>9</td>
<td>Student of Universitas Dwijendra</td>
<td></td>
<td>43 people</td>
</tr>
</tbody>
</table>
The learning media used by Civics Education lecturers are seen by students as things that must be updated, due to several reasons. The following presents the results of a questionnaire about some of the reasons why learning media are in the spotlight and what media are desired by students (Table 2).

Lecturers in compiling teaching materials related to *dharma agama* and *dharma negara* as the substance of Civic Education material really need in-depth analysis. Practitioners of Hindu Religion (WS) stated that the ability of lecturers in analyzing Civic Education material in the context of fostering *dharma agama* and *dharma negara* must involve resource persons who have spiritual abilities and resource persons who are experts in the field of government. The lecturer is one of the resource persons in civic education learning, it is proper to have the ability like the “Rajarsi”. The concept of *dharma agama* and *dharma negara* which is instilled by lecturers is not just a discourse,

### Table 2. The Importance of Updating Learning Media and Criteria for Learning Media Expected by Students

<table>
<thead>
<tr>
<th>Reasons to Do Updates</th>
<th>Expected Learning Media Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>The learning media used by the lecturers are less attractive and innovative, so that students feel bored quickly studying Citizenship Education material.</td>
<td>Lecturers make learning media according to the characteristics of students, namely the digital native generation.</td>
</tr>
<tr>
<td>The media used by lecturers so far have not been able to develop student thinking.</td>
<td>Using learning media that combines conventional media with technology-based media.</td>
</tr>
<tr>
<td>The media used by lecturers has not adjusted to the development and progress of science and technology.</td>
<td>The media must contain android-based practice questions.</td>
</tr>
<tr>
<td>Learning media in the form of printed books which are not sufficient in number with the number of students.</td>
<td>The media must contain enrichment tasks in order to provide opportunities for students to enter the field.</td>
</tr>
</tbody>
</table>
but how lecturers try to lead students to be able to implement *dharma agama* and *dharma negara* in their daily lives.

The material for Civic Education contains the subject of the rights and obligations of citizens towards the state. This subject has something in common with the implementation of *dharma negara*. Meanwhile, as Indonesian citizens, not only have obligations to their country but also have obligations to the religion they adhere to. **MSH** stated that “becoming a good citizen and obeying the law, one of the efforts to build awareness is through the *dharma agama* and *dharma negara*. **MJS**, who is a Civics lecturer with an Islamic background, assesses that the values of Hindu spiritual culture which are a reflection of the values of Pancasila can be integrated with civic education learning, provided that only the values of Hindu teachings are universal. If the lecturer wants to make civic education teaching materials based on Hindu spiritual values, the title of the teaching material should not contain the word “Hindu”, so that there is no conflict caused by religious differences.

The subject matter of “Citizens’ Rights and Obligations” needs to be inserted with some content sourced from Balinese Hindu spiritual cultural values, in the context of fostering religious dharma and state dharma. Civic Education Practitioners (**KR**) stated that the value of *yadnya* or sincerity must be instilled in students. With students having sincerity in themselves, they will achieve freedom or peace. Cultural Practitioners (**KS**) also gave their ideas and ideas related to the material in the Civic Education lecture that must contain the ideology of *tri hita karana*.

The design of the electronic module for civic education in the context of fostering *dharma agama* and *dharma negara* is one of the important findings. **WS** has the opinion that the design of Citizenship Education teaching materials must be integrated with Hindu spiritual values, so that students have the feeling that apart from studying Civic Education, they are also learning material from their religion. In addition, Civic Education teaching materials must also adapt to technological developments and student characteristics. **KS** has an idea in the design of teaching materials that must adopt Balinese culture, such as Balinese folklore (*satua Bali*). This is intended so that the Balinese Unity still exists and is loved by the students, because in essence the Balinese Unity contains noble values and is very suitable to be used as a supporting medium in learning Civic Education. **SS** added that Civic Education learning must be able to facilitate students to perform projects in the field, this is aimed at not only sharpening the cognitive abilities of students but also sharpening students’ social skills and attitudes. Civic Education Practitioners (**KR**) emphasized that Civic Education teaching materials must be pragmatic, which means that the theories in Civic Education learning must be in line with students’ daily lives, and Civic Education teaching materials are also said to contain: 1) instructions for use teaching materials; 2) learning objectives; 3) the scope of the material presented; 4) concept map; 5) materials that have been integrated with Hindu spiritual cultural values; 6) discussion and enrichment questions; and 7) bibliography.

Based on the results of observations in the field, related to the Civics Education teaching materials used so far at the higher education level, it can be detailed in the following Table 3.
Table 3. Results of Observation of Civic Education Teaching Materials Used at Higher Education Levels.

<table>
<thead>
<tr>
<th>No</th>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Characteristics of Students who take Civic Education courses</td>
<td>Students who take Civic Education courses are digital native generations and have heterogeneous religious backgrounds.</td>
</tr>
<tr>
<td>2</td>
<td>Teaching materials used by lecturers</td>
<td>The teaching materials used by lecturers are in the form of books and modules provided by the central government and lecturers’ essays, policies issued by the government, scientific articles, learning videos, and the community itself.</td>
</tr>
<tr>
<td>3</td>
<td>Civic Education material that is more focused on inculcating and fostering the values of religious dharma and state dharma</td>
<td>Civic Education materials that are more focused on inculcating and fostering the values of dharma agama and dharma negara are the subject of “Citizens’ Rights and Obligations”</td>
</tr>
</tbody>
</table>

4 Discussion

The design of the civic education electronic module in the context of fostering dharma agama and dharma negara compiled by researchers is a type of interactive teaching materials, namely a combination of two or more media (audio, text, images, animation, and video) which are used by users manipulated or treated to control a command and/or natural behavior of lecture activities. In more detail, the design of the civic education electronic module takes Civic Education material, the sub-topic of “Citizens’ Rights and Duties” which has been integrated with life values originating from Hindu spiritual cultural values (Living Values Education). The design of teaching materials in the form of electronic modules is seen as a learning medium that matches the expectations of 69.8% of respondents who want a renewal of learning media in accordance with the characteristics of students belonging to the digital native generation. The characteristics of the digital native generation as revealed by Oktavia [10] are: 1) this generation tends to show their existence to the world, as a result they have accounts on Facebook, Twitter, Youtube, and other social media; 2) the digital native generation has a nature that tends to be more forthright, outspoken, and open-minded, and likes to reveal things that are his privacy through his status on his social media accounts; 3) this generation craves freedom and when they support something, they will support it fanatical; 4) the digital native generation has the ability to learn quickly because all information can be accessed via the internet, but the information obtained is immediately believed to be a fact without looking for the source of its authenticity.

The design of the Civic Education electronic module which has synergized between Hindu spiritual culture and the material substance of “Citizens’ Rights and Obligations” is expected to play a role in facilitating the growth and development of knowledge,
awareness, willingness and ability to think, behave and act in a democratic and responsible manner, and finally be able to carry out dharma agama and dharma negara. Through electronic modules that have been combined with the values of life (Living Values Education) can instill values: 1) love, students are motivated to have compassion for fellow human beings and are willing to help others in need sincerely; 2) the value of tolerance, students are encouraged to always try to respect differences in ethnicity, culture, religion, opinions, and actions of others who are different from themselves; 3) the value of responsibility, students in their capacity as Indonesian citizens and religious people always carry out their inherent obligations, both obligations to their country (dharma negara) and obligations to their religion (dharma agama). The approach that comes from the human conscience is an approach that is considered effective in the context of fostering the dharma agama and dharma negara. Only universal Hindu spiritual cultural values will be adopted into Civic Education learning, because Civic Education teaching materials based on Hindu spiritual cultural values are intended for all students, both Hindu and non-Hindu.

The design of this electronic module has a noble goal in helping students to be able to study independently, considering the current situation and conditions during the Covid-19 pandemic. Now students don’t need to spend money to buy teaching materials and they don’t need to bring teaching materials such as printed teaching materials, just by bringing an Android-based cellphone, they can learn anytime and anywhere. The framework for the design of Civic Education teaching materials in the context of fostering dharma agama and dharma negara in the form of electronic modules contains the following sections: 1) introduction; 2) keywords; 3) concept map; 4) material; 5) living values; 6) conclusion; 7) reflection; and 8) references. The design can be accessed at the link: https://s.id/KewajibanWargaNegaraDigitalNative, with a flip chart as shown in Fig. 2.

![Fig. 2. Flip Chart of Citizenship Education Electronic Module Design in the Context of Fostering Dharma Agama and Dharma Negara](image-url)
Based on the flip chart of the teaching materials above, it can be described that Indonesian citizens of the digital native generation are people born in 1980 and after who by law have been declared legal Indonesian citizens (Article 26 Paragraph 1 of the 1945 Constitution of the Republic of Indonesia). Domiciled as an Indonesian citizen, there must be inherent rights and obligations as an Indonesian citizen. The rights of Indonesian citizens are an authority possessed by Indonesian citizens to carry out something in line with the laws and regulations. In other words, the rights of Indonesian citizens are privileges that require Indonesian citizens to be treated special. On the other hand, the obligation of Indonesian citizens is something that must not be abandoned by Indonesian citizens in the life of society, nation and state. The obligation of an Indonesian citizen can also be referred to as a behavior or action that must be carried out by an Indonesian citizen in accordance with the privileges found in other citizens.

Obligations as citizens are not only limited to obligations between Indonesian citizens and between Indonesian citizens and their country, but as Indonesian citizens who are based on the belief in the one and only God, they must also carry out their obligations towards their religion. The embodiment of the state with the principle of God Almighty, of course, has implications for the Indonesian state which recognizes that humans and the people as supporters of the state are manifestations of God. Therefore, the state as a united people as one nation must also believe in the one and only God. This means that the life of the state must also reflect the values of holiness that come from the values of God. However, the state of Indonesia is not a religious state based on one particular religion. Indonesia is also not a secular state that separates state affairs from religious affairs. Indonesia is also not a theocratic state that considers state sovereignty to be the same as God’s sovereignty which causes the state to have absolute power. Indonesia is said to be a country based on the value of the One Godhead. With regard to its people, the state must also be able to guarantee the independence of each citizen to embrace his belief in God Almighty and carry out his worship in accordance with that belief. Therefore, the digital native generation in their capacity as citizens has an obligation to carry out dharma agama and dharma negara.

The electronic module design for Civic Education with the title “Citizens’ Obligations of the Digital Native Generation (guidance of dharma agama and dharma negara)” is equipped with several tasks aimed at honing civic knowledge, civic skills, and civic disposition skills of students. The first task is a discussion task, in this case students are required to discuss the assigned task together with colleagues. This discussion task featured a video about Balinese folklore (satua bali) entitled “Kebo Iwa”. Through this task, students are required to find the values contained in the story related to the implementation of dharma agama and dharma negara. This task has the function of honing the civic disposition and civic skills of students, as well as trying to preserve the local culture of the Balinese people. The second task, namely the exercise task, in this case students are required to be able to work on multiple choice questions independently correctly. The results of this assignment will automatically be seen and students can evaluate themselves. This task is given to students in order to hone student civic knowledge. The third task contained in this teaching material is the task of enrichment. This enrichment task is more complex, because it seeks to hone students’ civic knowledge, civic disposition, and civic skills. This task requires students to make observations and
field analysis of the problems faced by the surrounding community. Students must be able to identify problems that occur, analyze the background of the emergence of problems, identify whether or not there are community efforts in overcoming these problems, provide solutions that can be offered by students to the local community in overcoming problems, and steps in realizing the solutions provided.

This teaching material certainly has a goal to be achieved. Through the integration of Hindu spiritual cultural values into Civic Education teaching materials, it is hoped that: 1) students can explain the meaning of Indonesian citizens of the digital native generation; 2) students can describe the obligations of digital native generation citizens; 3) students can classify the obligations of digital native generation citizens towards religion (dharma agama); 4) students can classify the obligations of digital native generation citizens to the state (dharma negara); 5) students can find the value of dharma agama and dharma negara in Balinese folklore (satua bali) as a form of cultural preservation; 6) students can solve problems faced by society and the state as a form of implementation of obligations as Indonesian citizens; and 7) students can evaluate the efforts that have been made by the community and the state in solving problems faced by the community and the state.

So the teaching materials in the form of electronic modules have the main purpose of fostering dharma agama and dharma negara for the digital native generation. These teaching materials are prepared with the view that when citizens, especially digital native citizens, have been able to carry out the dharma agama and dharma negara in a harmonious and balanced manner, then this will be the estuary in realizing a civil society that is independent, faithful, Pancasilais, and democratic. In addition, the design of this teaching material has advantages, namely: 1) the design of this teaching material is related to the values of life (Living Values Education) so that students are expected to be able to recognize, deepen, describe, examine, internalize, and actualize the values of life in their lives. Day-to-day activities, both within the family, campus, and in the community; 2) the design of teaching materials has also been developed based on the real life of students and can be used as a guide in carrying out daily activities, so that teaching materials have value for the benefit of students; 3) the design of teaching materials has also facilitated students to be able to develop materials based on direct experience and findings (inquiry) from students, so that lecturers are required to be facilitators and motivators for students in carrying out their inquiry activities; and 4) teaching materials can develop students’ ability to reflect on the form of feedback on their understanding of procedures, principles, facts, and concepts that have been developed through the materials and reflect on their daily actions, both within the family, campus, and community.

5 Conclusion

In general, this study seeks to construct Civic Education material at the higher education level which is integrated with the spiritual values of Balinese Hindu culture. The integration of Civic Education materials with Hindu spiritual cultural values is more focused in the context of fostering dharma agama and dharma negara inherent in the younger generation of Hindus in their position as Indonesian citizens. The researcher is of the view that by integrating Civic Education materials with Hindu spiritual cultural values, it is hoped that it can prepare students to become citizens who are ready to enter the community and their country. This integration effort is considered successful, as evidenced
by the design of the Civic Education electronic module. This electronic module design is a solution in solving some of the problems experienced in Civic Education learning.

The theoretical implications arising from this research are: 1) providing ideas and ideas that Civic Education materials taught at the higher education level must be harmonized and integrated with the values of life (Living Values Education), for example the values of the Hindu spiritual culture of the community. Bali has been integrated into Civic Education material, which aims to enable citizens, especially the digital native generation, to practice their obligations to the Indonesian state (dharma negara) and carry out their obligations to their religion (dharma agama); 2) theoretically this research is a form of development of Vygotsky’s theory of constructivism, because this research suggests the practice of Civic Education at the higher education level in Bali which is influenced by the interaction pattern of the surrounding community along with the cultural values of the community; 3) The next theoretical implication is that when citizens have been able to carry out the dharma agama and dharma negara in a harmonious and balanced manner, then this will be the estuary in realizing civil society.

The practical implications resulting from this research are: 1) the younger generation of Hindus belonging to the digital native generation will easily understand and be able to carry out the dharma agama and dharma negara attached to themselves in their position as Indonesian citizens. 2) students will always be able to adapt to the environment where the campus is located, because students are not only required to study but are also required to understand the ideas, concepts, and cultural skills of the community in which they are located; and 3) lecturers in designing Civics Education teaching materials must be related to the values of life, teaching materials are developed in accordance with the real lives of students and in accordance with the characteristics of students as digital native generations, teaching materials provide opportunities to gain direct experience in the field through project citizen activities, and teaching materials contain content that can direct students to reflect on learning materials.

References


Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (http://creativecommons.org/licenses/by-nc/4.0/), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter’s Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter’s Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.