



Emancipatory and transformative Global Citizenship Education in formal and informal settings: Empowering learners to change structures

Marco Rieckmann

University of Vechta, Germany

Abstract

This paper examines the vignettes from the perspective of Global Citizenship Education (GCE), with a particular focus on emancipatory and transformative learning in formal and informal settings. Taking reflection on the learning experiences and processes described in the vignettes as a basis, it develops and discusses five theses. This discussion helps to clarify what GCE is, where it is successful, where it fails, and how it should develop. While this paper acknowledges the relevance of incidental learning for GCE – and thus the bottom-up, emic approach that is the focus of this special issue, analysis of the experiences presented in the vignettes shows that incidental learning is not a simple matter where GCE is concerned. It can also lead to outcomes that are not in the spirit of GCE, and may even run counter to it. Learning environments should be structured in such a way as to facilitate the development of global citizenship competencies, create a sense of belonging and solidarity, and enable students to reflect critically on power structures and contribute to the transformation of those structures. Teachers can contribute to this by deploying emancipatory, transformative pedagogies in the classroom but also by creating opportunities for incidental learning in line with GCE or by addressing the outcomes of incidental learning in the classroom and making it amenable to reflection. Teachers need appropriate (GCE) competencies to enable them both to deploy emancipatory, transformative pedagogies and to support incidental learning.

Introduction

This paper examines the vignettes and the stories they tell from the perspective of Global Citizenship Education (GCE) and Education for Sustainable Development (ESD),¹ with a particular focus on emancipatory and transformative learning in formal and informal settings.

My starting point for this essay is an understanding of education that assumes that, against the background of global environmental crisis, poverty and injustice, education should enable individuals to understand global interrelationships and to actively participate in the sustainable transformation of society, which includes empowering learners to change social structures. The educational concept of Global Citizenship Education aims to meet this requirement (KMK & BMZ, 2016; UNESCO, 2015; Bourn, 2014; Wegimont, 2013; Scheunpflug, 2008; Scheunpflug & Asbrand, 2006). This pedagogical approach is based on the idea that the development of a global society results in requirements that relate to learning in a factual dimension (dealing with the simultaneity of knowledge and non-knowledge), a temporal dimension (acceleration and lack of time), a spatial dimension (dissolution of boundaries and interconnection), and a social dimension (familiarity and strangeness) (Lang-Wojtasik, 2019).

In this context, GCE aims to empower learners to participate in the social learning and communication processes required for sustainable development; in the implementation of the Sustainable Development Goals (SDGs); and thus, in the promotion of a 'great transformation' (WBGU, 2011), equipping them with the necessary global citizenship competencies. In this respect, different competence frameworks are discussed for GCE (Rieckmann, 2018; OECD, 2018; KMK & BMZ, 2016; UNESCO, 2015).

An international Delphi study (Rieckmann, 2012) identified twelve key competencies as particularly important to an understanding of the key problems faced by global society and for shaping it through sustainable development, including systemic thinking, dealing with complexity, anticipation, and critical thinking. Similarly, current international discourse on ESD considers the following sustainability competencies to be particularly relevant: systems thinking competency, anticipatory competency, normative competency, strategic competency, collaboration competency, critical thinking competency, intrapersonal competency, implementation competency, and integrated problem-solving competency (Brundiers et al., 2021; Rieckmann, 2018; UNESCO, 2017).

However, GCE is not limited to the development of competencies; as transformative education, it is also concerned with the "transformation of the relationship between the individual and the world in a global perspective" (translated from German) (Scheunpflug, 2019, p. 66) and thus with changing attitudes, values, paradigms, and worldviews (Balsiger et al., 2017; Sterling, 2011). GCE is thus also expected to contribute to critical discourse on values. It can and should provide suggestions to encourage learners to reflect on their own values and take a position in the debate on values en route to sustainable development (Schank & Rieckmann, 2019; Balsiger et al., 2017).

Competencies (and related values) cannot simply be taught but must be developed by learners themselves (Weinert, 2001). GCE therefore requires an action-oriented, transformative pedagogy (Rieckmann, 2018; UNESCO, 2017), characterized by pedagogical principles such as a learner-centered approach, action-oriented learning, reflection, participation, systemic learning, future orientation, and transformative learning (Rieckmann, 2018; UNESCO, 2017). Here, it is important to emphasize that GCE is not only concerned with enabling learners to consume more sustainably in everyday life, but also with empowering them to contribute as citizens to the transformation of unsustainable social and economic structures (Schank & Rieckmann, 2019).

However, GCE is not only about integrating sustainable development and the global dimension into teaching or adding new content to school subjects or study programs, for example. In relation to sustainable development, schools, universities and other educational institutions should see themselves as places of learning and experience and therefore align all their processes with sustainability principles. For GCE to be more effective, educational institutions as a whole must be changed. Such a whole-institution approach aims to integrate sustainability into all aspects of educational institutions (curriculum, operation, organizational culture, etc.). In this way, institutions themselves act as role models for learners (UNESCO, 2017).

Yet GCE is not delivered solely through formal education but also through non-formal education and in informal learning environments. For example, universities not only integrate GCE into their curricula but “also offer settings for informal learning, such as discussions with fellow students or volunteering in student groups on campus where students learn outside the organized academic learning processes” (Barth, Godemann, Rieckmann & Stoltenberg, 2007, p. 420).

On the basis of reflection on the learning experiences and processes described in the vignettes, I have developed five theses, which are discussed below:

1. Informal learning through student engagement plays a crucial role in GCE.
2. A whole-institution approach is needed to overcome exclusionary structures in educational institutions.
3. Transformative ways of dealing with heterogeneity and diversity and the associated power relations are needed to promote a sense of belonging and prevent othering.
4. GCE needs to be designed in such a way as to promote learner emancipation and not overwhelm learners.
5. For GCE to be transformative, it must not only aim to achieve changes in individual (consumer) behavior but must also take account of the need for structural change.

The discussion of these theses below clarifies what GCE is, where it is successful, where it fails, and how it should develop, by analyzing the descriptions, events, participants, voices, etc. presented in the vignettes. It discusses how these practices can inform, challenge, and change our conceptions of GCE. While this paper acknowledges the relevance of incidental learning for GCE – and thus the bottom-up, emic approach that is the focus of this special issue, it aims to show that incidental learning can also lead to outcomes that are not in the spirit of GCE, and may even run counter to it, and that teachers play an important role in creating opportunities for incidental learning in line with GCE and in addressing the outcomes of incidental learning in the classroom and making it amenable to reflection.

Perspectives on Global Citizenship Education

Thesis 1: Informal learning through student engagement plays a crucial role in GCE. Informal learning is “any activity involving the pursuit of understanding, knowledge or skill which occurs without the presence of externally imposed curricular criteria” (Livingstone, 2001, p. 4). Drawing on Schugurensky (2000), three forms of informal learning can be differentiated: self-directed learning (both intentional and conscious), incidental/experiential learning (unintentional but conscious), and socialization (tacit learning, unintentional and unconscious). Informal learning in all its forms, but particularly experiential learning, contributes to the development of competencies because it is related to action.

Informal learning can play a crucial role in GCE. This is clearly illustrated in the example provided by Meg P. Gardinier (Vignette 4). Protesting Albanian students took an active stand to defend their and others’ rights, developed a sense of solidarity, and were enabled to act on a sense of “empathy and/or shared identity with others in the collective concerns of protecting rights to education and sustainability” (Gardinier, Vignette 4).

This shows how youth civic engagement can contribute to the development of global citizenship competencies. Experiential learning in particular facilitates the development of competencies relating to action (Dohmen, 2001, p. 33). According to Lipski (2004), informal learning is particularly important for the development of ‘life competency,’ namely the capacity to plan and implement projects that serve to realize individual and/or shared life goals; the capacity for self-organization plays a key role here.

In this respect, as the bottom-up, emic approach claims, there are indeed many contexts where we can learn incidentally about global connections and develop our global citizenship competencies. Student protests are a good example: The ‘Back Lives Matter’ movement and the ‘Fridays for Future’ movement connect students

worldwide. But educational institutions can also create spaces where informal learning can take place and that can support informal learning processes (Barth et al., 2007) – for example as part of a whole-institution approach.

Thesis 2: A whole-institution approach is needed to overcome exclusionary structures in educational institutions.

The whole-institution approach contends that educational institutions should be role models for learners and should create structures and a culture that reflects and promotes sustainability and equality (Mogren, Gericke & Scherp, 2019; UNESCO, 2017).

When the learning processes sought by GCE are not in harmony with society's structures and culture, tensions inevitably arise, as illustrated in particular by the stories of Natasha Robinson (Vignette 1) and Heather Kertyzia (Vignette 5). The conversation about South Africa's structural inequality and the role of an architect of apartheid in a school "that is structurally exclusive" (Robinson, Vignette 1) results in "a racial divide" (ibid.) in the classroom. It becomes apparent that underlying power relations make it impossible to discuss the issue on equal terms or to work on the basis of shared perspectives. And the case of GCE in an international university and an LA university with a student population from marginalized neighborhoods shows that learning processes relating to power structures and violence occur in both institutions, but due to the lack of a real-world connection to global issues, the LA students cannot experience the global dimension (Kertyzia, Vignette 5). The question arises as to how the institution itself can provide this access.

In the context of a whole-institution approach, GCE should form the basis for comprehensive change in the educational institution (Mogren et al., 2019). This can refer, among other things, to the sustainable design of the school grounds or university campus and buildings, or sustainable and diverse provision in the canteen that is collectively planned and is fair to all. All students are involved in a diverse and holistic approach to issues of sustainability and (global) justice (UNESCO, 2017). But in terms of inclusion, GCE is also concerned with educational institutions' democratic structures, cultures of participation, and reflection on their power structures, creating a safe and empowering environment for dealing with structural inequality. However, it must also be acknowledged that structural inequalities cannot simply be overcome. Nonetheless, the whole-institution approach can contribute to making inequalities visible and amenable to reflection, thus laying the foundations for joint work to overcome them.

The participation of educational institutions in local and regional sustainable development processes is also crucial (UNESCO, 2017). This can also lead to projects that connect the local to the global and make global issues visible to students from

marginalized neighborhoods. Networks and cooperation structures, e.g. between the LA university and the international university, would also be very valuable here, creating a space where the two realities meet and power structures can be jointly reflected upon.

In line with the bottom-up, emic approach, educational institutions should not be “a location of destructive social reproduction” (Gardinier, Vignette 4), where students learn incidentally that exclusion is normal, but of transformative change, providing students with a setting in which they can learn incidentally how structures of exclusion and inequality can be reflected upon, considered and even overcome. This also requires teachers who not only actively integrate GCE into the curriculum but also contribute to the transformation of the whole institution (Corres, Rieckmann, Espasa & Ruiz-Mallén, 2020; Vare et al., 2019).

Thesis 3: Transformative ways of dealing with heterogeneity and diversity and the associated power relations are needed to promote a sense of belonging and prevent othering.

GCE aims to provide “experience in global and intercultural contexts” (Barth & Rieckmann, 2009, p. 26) because being aware of “different perspectives and interpretations” (ibid., p. 27) and possessing the associated “worldmindedness” (Selby, 2000, p. 3) enables learners to find their way in the networked global society and to deal with global diversity. However, bringing global diversity into the classroom is very challenging, and there is a risk of “uncritical reinforcement of notions of the supremacy and universality of ‘our’ (Western) ways of seeing and knowing, which can undervalue other knowledge systems and reinforce unequal relations of dialogue and power” (Andreotti & de Souza, 2008, p. 23).

What this can look like in educational practice is shown by the bringing together in the classroom of refugee students and German students, as described by Annett Gräfe-Geusch (Vignette 2). Her observations illustrate how, instead of engaging positively with diversity and creating a sense of belonging, negative stereotypes were reinforced by emphasizing differences between the two groups of students and marking the refugee students as not yet knowing how to behave properly in the German context and thus still being “in need of reform” (Gräfe-Geusch, Vignette 2).

Thus, the students’ encounter leads to othering, by defining the German students as superior and their values as universal and the refugee students as an inferior out-group. Othering is expressed by differentiating an in-group from an out-group, creating the other, and, based on stereotypes, separating oneself from the other to self-affirm and protect oneself (Dervin, 2014).

To prevent othering and to allow for truly emancipatory and transformative GCE, it is necessary to challenge prejudices, stereotypes and biases (Derman-Sparks,

1989). This is where the ‘Through Other Eyes’ framework, which is about “learning to unlearn, learning to listen, learning to learn and learning to reach out” (Andreotti & de Souza, 2008, p. 29), can be useful. It has links to transformative education, which focuses on the transformation of frames of reference (Scheunpflug, 2019; Balsiger et al., 2017; Cranton, 2002; Mezirow, 1997) that “are deeply embedded in our childhood, community, and culture” (Cranton, 2002, p. 67). These frames of reference (attitudes, values, paradigms, and worldviews) are developed through experience and are mostly uncritically assimilated (Cranton & King, 2003).

To facilitate a bottom-up, emic approach that promotes incidental learning in the spirit of GCE, learning environments are needed in which learners become “aware and critical of their own and other’s assumptions” (Mezirow, 1997, p. 10), and are encouraged to reflect on these frames of reference in a critical, de-constructing, and transgressive way, so as to stimulate truly transformative learning processes that result in conceptual change (Rodríguez Aboytes & Barth 2020; Lotz-Sisitka, Wals, Kronlid & McGarry, 2015; Sterling, 2011).

As Annett Gräfe-Geusch’s example also makes very clear, this requires teachers who themselves are willing “to include differences” and see “diversity as an opportunity” (Gräfe-Geusch, Vignette 2), but also have the corresponding reflective and pedagogical competencies to design such transformative learning environments (Corres et al., 2020; Vare et al., 2019; Balsiger et al., 2017).

Thesis 4: GCE needs to be designed in such a way as to promote learner emancipation and not overwhelm learners.

Education should foster in learners the capacity for self-determination, co-determination, and solidarity (Klafki, 1998). In this sense, emancipatory GCE also aims not to prescribe certain ways of thinking or behaving, but to stimulate learning for independent and self-determined reflection (Scheunpflug, 2019). Or in other words: “Transformative learning must not be used to instrumentalize learners but to empower them for autonomous critical action” (Balsiger et al., 2017, p. 359).

Jennifer Riggan’s example (Vignette 3), on Citizenship Education in Ethiopia, shows that this kind of emancipatory pedagogical approach is by no means self-evident. In this case, all students are taught a certain understanding of citizenship and personhood and “particular habits, beliefs and dispositions” (Riggan, Vignette 3), with especial emphasis on the relevance of saving in ‘modern’ society; this is a compulsory subject and is more or less imposed on them. Moreover, it becomes clear that the view imposed on the students does not fit with the reality of their lives. Education can be understood here as an instrument of indoctrination to safeguard the prevailing ideology (of the ruling party).

GCE that sees itself as emancipatory and transformative should not manipulate learners, force them to think or behave in a particular way or to adopt specific values; instead, learners should be encouraged to think for themselves about socially relevant issues and find their own answers (Scheunpflug, 2019; Shephard, Rieckmann & Barth, 2019; Vare & Scott, 2007). The aim should be to develop global citizenship competencies that enable students to make decisions that fit with their reality and equally that take a morally responsible approach to the realities of global society (Rieckmann, 2018; UNESCO, 2017). Learners' maturity and independent judgment must be kept in mind to enable them to form a view on socially controversial topics. And in the spirit of the bottom-up, emic approach, this refers not only to the design of formal learning environments but also to how teachers create spaces in which learners can engage incidentally with specific societal issues and develop their own ideas about them.

As Heather Kertyzia (Vignette 5) points out, Freirean pedagogy can be a helpful and effective method for introducing a “teaching practice based on critical self-reflection” as a “starting point for creating pedagogies for positive change.” However, this also presupposes that the teachers themselves are in a position to shape GCE in this emancipatory way (Corres et al., 2020; Vare et al., 2019).

Thesis 5: For GCE to be transformative, it must not only aim to achieve changes in individual (consumer) behavior but must also take account of the need for structural change.

GCE starts with individuals and their acquisition of knowledge and competencies as well as their attitudes, values, paradigms, and worldviews. Thus, “the responsibility for sustainable development shifts to the private sphere” (translated from German) (Grunwald, 2010, p. 178). Individual responsibility is emphasized, while the public responsibility of political bodies and the role of (multinational) companies tends to be marginalized. This is problematic in several respects: Firstly, the complexity and uncertainty associated with sustainability-related decisions can overwhelm individuals – they often lack the necessary knowledge. Secondly, tradeoffs can occur even where supposedly sustainable behavior is concerned. Thirdly, the separation between the public and the private sphere becomes blurred (Grunwald, 2010).

Focusing solely on individual responsibility is also problematic because it underestimates the dominance and permanence of social structures and cultural patterns. “Individuals ... are often ‘atomized’ by the practices and procedures of institutions and the ideology of ‘democratic’ and ‘consumer choice,’ while their behaviour is heavily circumscribed by structures, institutions and practices over which they have little influence or control” (Wals, 2015, p. 13). For example, consumption is not simply shaped by individuals, but is culturally embedded (Assadourian, 2010). And

the market economy and its inherent ‘growth spiral’ (Binswanger, 2012) also limit the potential for changes in individuals’ behavior.

When GCE is put into practice, however, there is often a predominant focus on the role and responsibility of individuals. For example, Mr. Cilliers, the South African teacher, completely ignores the role of structures and tries to convince his students that there would be less violence in the world if everyone were only nicer to one other (Robinson, Vignette 1). Even when his actions lead to open conflict in class, he does not use this opportunity to address power relations and inequality. It is very important to deal with the role played by emotions in the context of GCE (Robina-Ramírez, Medina Merodio & McCallum, 2020; Ojala, 2012). However, this should not lead to students being led to believe that social structures can be changed through an emotional approach alone.

Heather Kertyzia (Vignette 5) succeeds in getting students at the LA university to address issues of violence and injustice – but they were only “motivated to seek solutions to the violence and injustice they saw around them on a daily basis and did not see the global issues as their concern.” This omits an examination of structures that have a significant influence on the lives of these students.

Sustainable development is also concerned with structural issues in many fields. However, if a “fixation on learners as private consumers” is in the foreground, this hinders “structural transformation of the conditions criticized [by GCE]” (translated from German) (Danielzik, 2013, p. 31). Thus, it is of central importance in GCE not only to focus on the individual but also to raise the question of structures, of the ‘great transformation’ (WBGU, 2011). Sustainable transformation of society is not a private matter, but a public task (Grunwald, 2010).

It ... requires the capacity to disrupt and to transgress prevailing, dominant and unquestioned frameworks and systems that predetermine and structure social and economic behavior, and that, somewhat ironically, have proven to be highly resilient themselves. This capacity is little emphasized in the current discourse around sustainability governance and in circles connected to education and learning in the context of sustainable development. By stressing disruptive capacity building and transgressive learning the focus shifts away from learning to cope with the negative and disempowering effects of the current hegemonic ways of ‘producing,’ ‘consuming’ and ‘living’ to addressing the root causes thereof and to the quest for morally defensible, ethical and meaningful lives. (Wals, 2015, p. 30)

This idea does not contradict the focus on transformative learning (and related competence development and reflection on values) attributed to GCE in the foregoing sections. However, it is important that transformative learning is not considered primarily in relation to sustainable consumption behaviors, and that there is also an examination of how transformative learning – through formal education but also incidentally – can enable students to contribute to structural change (through the

development of appropriate competencies) (Schank & Rieckmann, 2019; Balsiger et al., 2017).

Conclusions

GCE can take place in both formal and informal settings – and also incidentally, as the example of the student protests in Albania shows, confirming the relevance of the bottom-up, emic approach. This does not mean, however, that it takes place of its own accord. As the stories in the vignettes show, it is not enough for something to be well-intentioned. Then accidents can easily occur that lead to the opposite of the intended outcome.

Thus, the examples from the vignettes show that GCE is not a simple matter. Learning environments should be structured in such a way as to facilitate the development of global citizenship competencies, create a sense of belonging and solidarity, and enable students to reflect critically on power structures and contribute to the transformation of those structures. On the one hand, this can be enabled by formal education through emancipatory, transformative pedagogies. On the other, teachers can also contribute to the creation of opportunities for incidental learning that are in line with the bottom-up, emic approach characteristic of GCE. This can be achieved, for example, by taking a whole-institution approach, but also by teachers being more aware of incidental learning and giving learners opportunities to reflect together on insights gained from incidental learning. Teachers need appropriate (GCE) competencies to enable them both to deploy emancipatory, transformative pedagogies and to support incidental learning.

Here, the following questions arise: How can whole-institution-based change in educational institutions take place at a broader level? How can more teachers be encouraged to take an interest in GCE than has so far been the case and, above all, how can they be enabled to work with the concept? How can the positive experiences of informal, incidental GCE learning (e.g. in student protests) be better integrated into formal learning processes?

Note

1. In this paper, Global Citizenship Education and Education for Sustainable Development (ESD) are considered as complementary educational concepts that differ only in subtle respects. It therefore also refers to literature that uses the term ESD.

References

- Andreotti, V. & de Souza, L.M.T.M. (2008). Translating theory into practice and walking minefields: Lessons from the project ‘Through Other Eyes’. *International Journal of Development Education and Global Learning*, 1(1) 23–36. <https://doi.org/10.18546/IJDEGL.01.1.03>

- Assadourian, E. (2010). The rise and fall of consumer cultures. In Worldwatch Institute (Ed.), *State of the world 2010: Transforming cultures: From consumerism to sustainability* (pp. 3–20). Washington: Worldwatch Institute.
- Balsiger, J., Förster, R., Mader, C., Nagel, U., Sironi, H., Wilhelm, S. & Zimmermann, A.B. (2017). Transformative learning and education for sustainable development. *GAIA – Ecological Perspectives for Science and Society*, 26(4), 357–359. <https://doi.org/10.14512/gaia.26.4.15>
- Barth, M., Godemann, J., Rieckmann, M. & Stoltenberg, U. (2007). Developing key competencies for sustainable development in higher education. *International Journal of Sustainability in Higher Education*, 8(4), 416–430. <https://doi.org/10.1108/14676370710823582>
- Barth, M. & Rieckmann, M. (2009). Experiencing the global dimension of sustainability: Student dialogue in a European-Latin American virtual seminar. *International Journal of Development Education and Global Learning*, 1(3), 22–38. <https://doi.org/10.18546/IJDEGL.01.2.03>
- Binswanger, H.C. (2012). *The growth spiral: Money, energy, and imagination in the dynamics of the market process*. Marburg: Metropolis.
- Bourn, D. (2014). *The theory and practice of global learning* (Research Paper No.11 for the Global Learning Programme). London: Development Education Research Centre.
- Brundiers, K., Barth, M., Cebrián, G., Cohen, M., Diaz, L., Doucette-Remington, S. ... & Zint, M. (2021). Key competencies in sustainability in higher education – Toward an agreed-upon reference framework. *Sustainability Science*, 16(1), 13–29. <https://doi.org/10.1007/s11625-020-00838-2>
- Corres, A., Rieckmann, M., Espasa, A. & Ruiz-Mallén, I. (2020). Educator competences in sustainability education: A systematic review of frameworks. *Sustainability*, 12(23), 9858. <https://doi.org/10.3390/su12239858>
- Cranton, P. (2002). Teaching for transformation. *New Directions for Adult and Continuing Education*, 93, 63–72. <https://doi.org/10.1002/ace.50>
- Cranton, P. & King, K.P. (2003). Transformative learning as a professional development goal. *New Directions for Adult and Continuing Education*, 98, 31–38. <https://doi.org/10.1002/ace.97>
- Danielzik, C.-M. (2013). Überlegenheitsdenken fällt nicht vom Himmel. Postkoloniale Perspektiven auf Globales Lernen und Bildung für nachhaltige Entwicklung. *Zeitschrift für Internationale Bildungsforschung und Entwicklungspädagogik*, 36(1), 26–33.
- Derman-Sparks, L. (1989). *Anti-bias curriculum. Tools for empowering young children*. Washington, D.C.: National Association for the Education of Young Children.
- Dervin, F. (2014). Cultural identity, representation and othering. In J. Jackson (Ed.), *The Routledge handbook of language and intercultural communication* (pp. 181–194). London: Routledge.
- Dohmen, G. (2001). *Das informelle Lernen. Die internationale Erschließung einer bisher vernachlässigten Grundform menschlichen Lernens für das lebenslange Lernen aller*. Bonn: BMBF.
- Grunwald, A. (2010). Wider die Privatisierung der Nachhaltigkeit: Warum ökologisch korrekter Konsum die Umwelt nicht retten kann. *GAIA*, 19(3), 178–182. <https://doi.org/10.14512/gaia.19.3.6>
- Klafki, W. (1998). Characteristics of critical-constructive Didaktik. In B.B. Gündem & S. Hopmann (Eds.), *Didaktik and/or curriculum. An international dialogue* (pp. 307–330). New York: Lang.
- KMK (Standing Conference of the German Ministers of Education and Culture) & BMZ (The German Federal Ministry of Economic Cooperation and Development). (2016). *Curriculum framework education for sustainable development* (2nd updated and extended ed.). Bonn: KMK.

- Lang-Wojtasik, G. (Ed.). (2019). *Bildung für eine Welt in Transformation: Global Citizenship Education als Chance für die Weltgesellschaft*. Opladen: Verlag Barbara Budrich. <https://doi.org/10.2307/j.ctvbpnpz8>
- Lipski, J. (2004). Für das Leben lernen: Was, wie und wo? Umriss einer neuen Lernkultur. In B. Hungerland & B. Overwien (Eds.), *Kompetenzentwicklung im Wandel. Auf dem Weg zu einer informellen Lernkultur?* (pp. 257–273). Wiesbaden: VS Verlag für Sozialwissenschaften. https://doi.org/10.1007/978-3-531-90162-6_14
- Livingstone, D.W. (2001). *Adults' informal learning: Definitions, findings, gaps and future research* (NALL Working Paper, No. 21). Toronto: Centre for the Study of Education and Work.
- Lotz-Sisitka, H., Wals, A.E.J., Kronlid, D. & McGarry, D. (2015). Transformative, transgressive social learning: Rethinking higher education pedagogy in times of systemic global dysfunction. *Current Opinion in Environmental Sustainability*, 16, 73–80. <https://doi.org/10.1016/j.cosust.2015.07.018>
- Mezirow, J. (1997). Transformative learning: Theory to practice. *New Directions for Adult and Continuing Education*, 74, 5–12. <https://doi.org/10.1002/ace.7401>
- Mogren, A., Gericke, N. & Scherp, H.-Å. (2019). Whole school approaches to education for sustainable development: A model that links to school improvement. *Environmental Education Research*, 25(4), 508–531. <https://doi.org/10.1080/13504622.2018.1455074>
- OECD (Organisation for Economic Co-Operation and Development). (2018). *Preparing our youth for an inclusive and sustainable world: The OECD PISA global competence framework*. Paris: OECD. Retrieved from <https://www.oecd.org/pisa/Handbook-PISA-2018-Global-Competence.pdf>
- Ojala, M. (2012). Hope and climate change: The importance of hope for environmental engagement among young people. *Environmental Education Research*, 18(5), 625–642. <https://doi.org/10.1080/13504622.2011.637157>
- Rieckmann, M. (2012). Future-oriented higher education: Which key competencies should be fostered through university teaching and learning? *Futures*, 44(2), 127–135. <https://doi.org/10.1016/j.futures.2011.09.005>
- Rieckmann, M. (2018). Chapter 2 – Learning to transform the world: Key competencies in ESD. In A. Leicht, J. Heiss & W.J. Byun (Eds.), *Education on the move. Issues and trends in education for sustainable development* (pp. 39–59). Paris: UNESCO.
- Robina-Ramírez, R., Medina Merodio, J.A. & McCallum, S. (2020). What role do emotions play in transforming students' environmental behaviour at school? *Journal of Cleaner Production*, 258, 120638. <https://doi.org/10.1016/j.jclepro.2020.120638>
- Rodríguez Aboytes, J.G. & Barth, M. (2020). Transformative learning in the field of sustainability: A systematic literature review (1999–2019). *International Journal of Sustainability in Higher Education*, 21(5), 993–1013. <https://doi.org/10.1108/IJSHE-05-2019-0168>
- Schank, C. & Rieckmann, M. (2019). Socio-economically substantiated education for sustainable development: Development of competencies and value orientations between individual responsibility and structural transformation. *Journal of Education for Sustainable Development*, 13(1), 67–91. <https://doi.org/10.1177/0973408219844849>
- Scheunpflug, A. (2008). Why global learning and global education? An educational approach influenced by the perspectives of Immanuel Kant. In D. Bourn (Ed.), *Development education: Debates and dialogue* (pp. 18–27). London: University of London, Institute of Education.
- Scheunpflug, A. (2019). Transformatives Globales Lernen – eine Grundlegung in didaktischer Absicht. In G. Lang-Wojtasik (Ed.), *Bildung für eine Welt in Transformation: Global Citizenship*

- Education als Chance für die Weltgesellschaft* (pp. 63–74). Opladen: Verlag Barbara Budrich. <https://doi.org/10.2307/j.ctvpbnpz8.7>
- Scheunpflug, A. & Asbrand, B. (2006). Global education and education for sustainability. *Environmental Education Research*, 12(1), 33–46. <https://doi.org/10.1080/13504620500526446>
- Schugurensky, D. (2000). The forms of informal learning: Towards a conceptualization of the field. Retrieved from <http://www.oise.utoronto.ca/depts/sese/csew/nall/res/19formsofinformal.htm>
- Selby, D. (2000). Global education as transformative education. *Zeitschrift für internationale Bildungsforschung und Entwicklungspädagogik*, 23(3), 2–10.
- Shephard, K., Rieckmann, M. & Barth, M. (2019). Seeking sustainability competence and capability in the ESD and HESD literature: An international philosophical hermeneutic analysis. *Environmental Education Research*, 25(4), 532–547. <https://doi.org/10.1080/13504622.2018.1490947>
- Sterling, S. (2011). Transformative learning and sustainability: Sketching the conceptual ground. *Learning and Teaching in Higher Education*, 5, 17–33.
- UNESCO. (2015). *Global citizenship education: Topics and learning objectives*. Paris: UNESCO. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000232993>
- UNESCO. (2017). *Education for sustainable development goals. Learning objectives*. Paris: UNESCO. Retrieved from <http://unesdoc.unesco.org/images/0024/002474/247444e.pdf>
- Vare, P., Arro, G., Hamer, A. de, Del Gobbo, G., Vries, G. de, Farioli, F. . . . & Zachariou, A. (2019). Devising a competence-based training program for educators of sustainable development: Lessons learned. *Sustainability*, 11(7), 1890. <https://doi.org/10.3390/su11071890>
- Vare, P. & Scott, W. (2007). Learning for a change: Exploring the relationship between education and sustainable development. *Journal of Education for Sustainable Development*, 1(2), 191–198. <https://doi.org/10.1177/097340820700100209>
- Wals, A.E.J. (2015). *Beyond unreasonable doubt. Education and learning for socio-ecological sustainability in the anthropocene*. Wageningen: Wageningen University. Retrieved from https://arjenwals.files.wordpress.com/2016/02/8412100972_rvb_inauguratie-wals_oratieboekje_v02.pdf
- WBGU – German Advisory Council on Global Change. (2011). *World in transition – A social contract for sustainability*. Berlin: WBGU. Retrieved from <https://www.wbgu.de/en/publications/publication/world-in-transition-a-social-contract-for-sustainability>
- Wegimont, L. (2013). Global education: Paradigm shifts, policy contexts and conceptual challenges. In N. Forghani, H. Hartmeyer, E. O’Loughlin & L. Wegimont (Eds.), *Global education in Europe policy, practice and theoretical challenges* (pp. 195–207). Münster: Waxmann.
- Weinert, F.E. (2001). Concept of competence: A conceptual clarification. In D.S. Rychen & L.H. Salganik (Eds.), *Defining and selecting key competencies* (pp. 45–65). Seattle, WA: Hogrefe & Huber.