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Forschung und Innovation in der Hochschulbildung

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Forschung und Innovation in der Hochschulbildung

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praxiSDG: Adopting the banana principle for designing sustainability in action

Martin Gerner

1 Introduction

Which is the perfect moment to peel a banana? Similar to the banana, there is the moment for designing sustainability in action. In a process of evolution, the corresponding format *praxiSDG* has been changing its quality. The outcome depends on framing context conditions, comparable to the ripening variables of the maturation process of a fruit.

The banana plant, scientifically called *musa paradisiaca*, originating from South-East Asia and the Malaysian peninsula, and first domesticated in Papua New Guinea, is considered the world's largest herbaceous perennial plant; it belongs to the family *musaceae* and is valued for its fleshy-curved, delicious banana fruit. The plant gets pretty tall and grows in tropical regions with a tree-like pseudo-stem consisting of rolled leaves spirally arranged at the top. The leaves are large blades with a pronounced central midrib and obvious veins, easily reaching up to three meters in length and half a meter in width. Each plant produces a bouquet of flowers, the so-called *banana heart*, from which the fruits develop in typical hanging clusters. The banana fruit itself consists of the highly protective outer layer with numerous long, thin strings running between the skin and the edible inner pulp. The seeds are tiny black specks concentrating towards the centre of the fruit. Bananas in commercial plantations are hybrids; i. e. the parent banana plant dies after harvest and is to be replaced with a new daughter plant. If managed properly, however, a plantation can carry a high yield for a generation or more. Banana trees can reach heights between two and nine meters. The well-known export bananas are picked green; they ripen in special chambers upon arrival in the destination country only. These premises are air-tight and filled with ethylene gas to trigger and induce ripening. The vivid yellow colour consumers usually associate with commercial export bananas is caused by the *artificial* ripening process, in fact.

Figure 1: Botanical interlude.

The following remarks are focusing on the initial question of taking the case of *praxiSDG*, how does a sustainability-driven service-learning format evolve, given didactic premises, institutional modalities, and individual notion? Sustainability invokes a holistic notion of addressing different aspects – the so-called *quadruple bottom line* of sustainability dimensions – of SDG-related learning in *praxiSDG*.
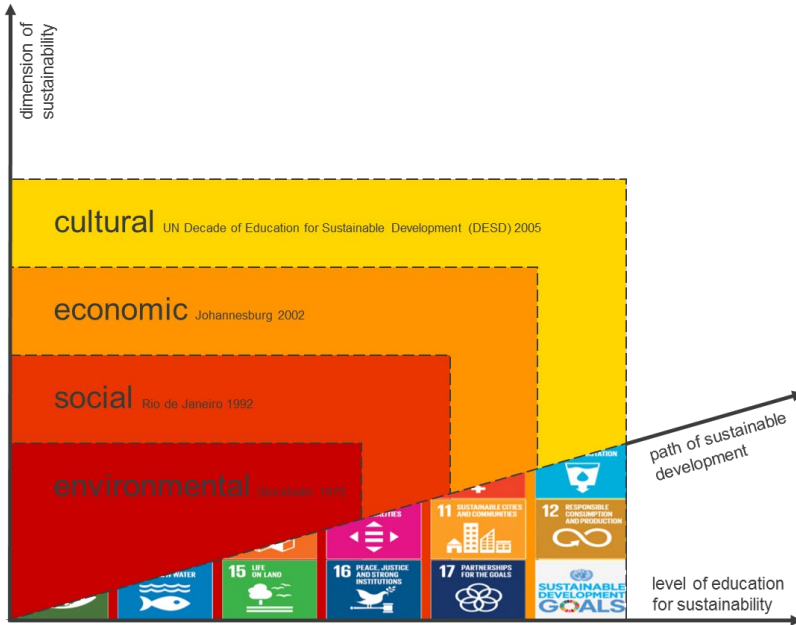
Figure 2: SDG-related learning in *praxiSDG* across the quadruple bottom line of sustainability.

praxiSDG promotes options for tentative observations and suggestions for pragmatic action (Badley, 2001, p. 170). As progressively-evolving learning assignment, it merges formative design elements of self-conducted reflection and research with professional evolution through advanced, on-the-job training of the facilitating team, thus, contributing to practices of both *scholarship of teaching and learning* (SoTL) and *scholarship of academic development* (SoAD), simultaneously.

The outline is determined by the leading question of how the sustainability-driven service-learning format *praxiSDG* evolves (fig. 2). Different context conditions, such as didactic premises, institutional modalities or individual notions, are framed by purposefully drawing comparisons to the banana paradigm alluding to the banana principle itself and the monkey-peeling method. Therefore, relevant case-based information are commented in a meta-textual way: Institutional stakeholders are identified, labelled, anonymized and referenced accordingly. Respective contributions to the evolution of *praxiSDG* are then systemized and highlighted from an intuitive, experience-driven point of view. Major strategic injection points for evolutionary alignments are indicated throughout the process along periods and didactic impact, followed by lessons learnt and concluding remarks in the banana analogy.

2 Peeling philosophies

Which is the perfect moment to peel a banana? Certainly once it turns out to be ripe. As fruits mature, they change their quality. Beginning and results of this maturing process, culminating in the ripening phase, are always in the eye of the beholder and largely depend on framing context conditions.

praxiSDG activates knowledge, skills and intuition of participants in a target-oriented way of committing themselves to efforts for sustainability of institutions or corporations in the non-profit/civil-society sector (*community-based learning*). In doing so, participants learn to act as change agents in programme design, strategy or operative activities within their preferred partner organization (*service learning*). Based on the respective needs of the partner organizations, participants will design their individual projects in a collaborative way, including a precisely formulated aim for self-determined, sustainability-related action. This enables participants not only to learn about the significance of volunteerism, but also to evaluate and reflect its opportunities and risks vis-à-vis their individual study contexts.

praxiSDG is a *service learning* that intends to attract participants with a strong sustainability agenda across disciplines and study semesters and engages participants in a proactive, self-determined and exploratory way with partner-organization projects in a predefined scope. It provides innovative term-based e-learning/blended-learning opportunities, including four classroom-learning sessions and optional e-tutoring/consultation, is promoted by a teaching tandem to support interdisciplinary learning, and concludes with credit points and an optional certificate. Learning objectives of *praxiSDG* are:

- providing theoretical-conceptual background in the areas of volunteerism/civic engagement (e. g. urban commons, co-creation), common public interest, service learning and sustainability-related terminology (e. g. SDGs),

- enabling insights into different opportunities for sustainability-oriented commitment in institutionally structured, non-profit fields of activity,

- facilitating a specifically contextualized commitment determined by the need of the partner organization,

- analysing of individual, discipline-specific and professional strategies of engagement,

- reflecting of experiences in a structured and systematically guided way,

- preparing a professional presentation of one's genuine service-learning experiences, and

- practicing project-based, interdisciplinary team work in teams with heterogeneous needs and prerequisites.

Figure 3: *praxiSDG* interlude.

The didactic challenge tackled by *praxiSDG* is to enact sustainability by means of civic engagement through a coherent, constructively aligned methodological approach. As to participants liaising the seventeen *sustainability development goals* (SDGs) with an institutionalized learning process has to be more than just some kind of academic nexus with service learning. What counts is pragmatic, documented and reflected action, ready for curricular embedding and accreditation.

Designing, implementing, evaluating and refining learning opportunities in academic contexts often pursues the *banana principle*. In view of this paradigmatic principle, customers receive unfinished products from manufacturers, usually without any corresponding instructions. The products gradually mature over time due to customer feedback and corresponding improvements made by the manufacturers. Quality is subject to change; it usually improves.

1. The *banana principle* may be related to *praxiSDG*, since the maturing process of this novel, sustainability-oriented service-learning assignment originates from readiness and adaptability of the participants, and from expertise and intuition shared by the authoring scholars, including positively reframed limitations imposed by the institutional context conditions. Insights specifically associated with *praxiSDG* comprise several institutional touchpoints, each differing in scope, size, region, socio-cultural context or degree of curricular embedding, inter alia. Related snapshots display how processes of innovation are nudged and shaped by the person's creativity throughout and as a result of institutional contexts, at the end of the day.

Most people peel a banana by cutting or snapping the stem and by dividing the peel into several sections while pulling them away from the peeled fruit. A different method of peeling a banana is right in the opposite direction, i. e. upside down from the end with the brownish floral residue. When the tip of a banana is pinched with two fingers, it will split and the peel comes off in two clean sections. This is considered particularly advantageous since the inner fibres or strings between fruit and peel will remain attached to the peel, and the stem of the banana can be used as a handle when eating the banana. This way has become known as *monkey method*, since it describes how monkeys are said to peel their bananas.

Figure 4: Peeling interlude.

2. The *monkey-peeling method* may be applied to *praxiSDG*, when coming to terms with diverse needs and requests of stakeholders. As to the experiences, it makes sense to constantly question established assumptions about designing learning assignments, and to prove one's willingness to deviate from purposefully assumed patterns if necessary. Based on the notion that sustainability transformation challenges system boundaries, *praxiSDG* as a related format of learning must correspond to this paradigm in terms of being adaptive and conducive. Alternative solutions to the prevailing mainstream are to be encouraged; put differently, peeling the banana differently must be within the realm of unexpected opportunities.

praxiSDG incorporates the *banana principle* and the *monkey-peeling method* for designing sustainability in action.

3 Banana principle

praxiSDG is embedded into the service-learning context. As to the taxonomic level, it appears to liaise with *independent studies*, since participants are encouraged to work on their own, self-determined topics propelled by their projects of truly intrinsic, sustainability-driven civic engagement. The learning process is professionally facilitated; participants are didactically tutored and coached on an individual basis depending on their needs, capacities and/or contextual constraints. This enables them to elaborate their projects autonomously, yet assisted if required.

Paradigms of academic development, such as designing, piloting and reflecting assignments through teaching and learning in internal and external apperception, frequently highlighted by scholars in cross-disciplinary perspective (Boyer, 1990, pp. 18-19), coincide with certain elements and characteristics of *praxiSDG*:

- *Context conditions*: Academic identity is formed through bargaining processes that are always changeable, evolving and sensitive to context, including shifting framework conditions (Stensaker, 2018, p. 275; Bennett et al., 2015, p. 218). The coming into being of *praxiSDG* can be explained through an academic self-image based on the particular context conditions stipulated by the institutions involved. For instance, commissioned teaching and time limitations represent two common knock-out criteria influencing long-term evolution of academic institutions. Scholarly persons frequently become *travelling nomads*. Accepted as part of the academic system, they are challenged to make a virtue out of the given necessities. Interestingly, compelling learning assignments sometimes evolve from institutional requirements that are considered context conditions detrimental to development.

- *Situated knowledge*: Transferring local knowledge from, to and beyond communities is essential for successful knowledge-creating organisations, including institutions of higher education, such as colleges or universities (Geertsema, 2016, p. 129). Tapping the potential of contextualized and community-based expertise is at the core of organizational knowledge creation. *praxiSDG* fosters vibrant and knowledgeable interdependencies through sustainability-related partnerships – both established and emerging – with SDG-related associations, non-profit organizations, municipalities, higher-education institutions and schools, inter alia.

- *Continuous improvement*: Impact is achieved by promoting cultures of continuous improvements within and across institutions (Canning & Masika, 2020, p. 3; Boyer, 1990, pp. 19, 46). In the long run, incrementally evolving *non-hybrids* are to be cultivated. This principle, however, acknowledges anticipatory design-thinking rather than short-term, ephemeral effects frequently encountered in project logics. Pursuing this work-in-progress notion, *praxiSDG* aims at achieving impact and self-efficacy of all contributing parties while doing.

- *Adaptive learning*: Lessons learnt of failure are to be reflected upon and reframed for continuing advancements. Adaptive learning induced and promoted by trial and error or failure and success, respectively, are nudging elements of academic development (Timmermans & Sutherland, 2020, p. 44; Sutherland & Hall, 2017). Experiences of failure are typically individualised and discretely privatised. Stories of failure, however, are powerful and intriguing once made visible as part of the design process itself. Trial-and-error-loops are considered essential drivers for *praxiSDG* in the design process, including challenges and pitfall conditions, such as stakeholder motivation, curricular embedding or learning habits.

- *Exploring attitude*: Researcher-led perspectives provide research frames as point of overlap between academic development and the scholarship of teaching and learning in a pragmatic, sometimes eclectic way (Kinchin et al., 2018, p. 351; Badley, 2001, p. 168). *praxiSDG* adopts this exploratory nexus from a case-based perspective assuming the triple mandate of reconciling positions of educational lecturer/facilitator, academic researcher and professional developer at the same time. This purposefully envisaged self-concept aims to enhance all dimensions of teaching, learning and scholarship higher-education institutions, such as universities.

In terms of academic development, *praxiSDG* may be associated with the *banana principle*, the common practice in the handling of bananas: They are harvested unripe, delivered green to distributors for further maturing, such as ripening under optimized atmosphere before being sold as edible fruit. Flavours of academic development coincide with evolutionary steps and related design-quality levels of *praxiSDG* that may be attributed to stages of banana maturation (fig. 5).

3.1 *banana I*: realizing WHY to grow

Emanating from a cognitive impetus, liaising intuition led to the mission of designing and implementing a sustainability-oriented service-learning assignment.

Bananas are staple starches for many tropical populations. Depending on cultivating and ripeness, both the flesh varies in taste from starchy to sweet, and the texture from firm to mushy. You may need a certain awareness recognizing these differences. The cognitive *impetus* of becoming familiar with service learning as learning assignment took place at a higher-education conference series [13. April 2018 at A, #1] without actually knowing about its nutritious potential.

The primary component of the aroma of fresh bananas is *isoamyl acetate*, known as *banana oil*. Along with several other compounds, such as *butyl acetate* and *isobutyl acetate*, it is a significant contributor to the typical banana flavour. The *intuition* to liaise sustainability with service learning emerged quickly [during summer 2018 due to G, #2]. Particularly, key motivational driver was accomplishing studies on sustainability management, including corporate case studies.

Green, less ripe bananas contain higher levels of starch; as a matter of fact, they taste starchier. Yellow bananas, however, taste sweeter due to higher concentrations of sugar. In addition, *ethylene* signals the production of *pectinase*, an enzyme which breaks down the pectin between the cells of the banana, causing the banana to soften as it ripens. The *mission* of realizing a sustainability-driven service-learning assignment became vibrant [in August 2018 at C, #3], consciously taking into account anticipating the structural-institutional context for accelerating enzymes.

3.2 *banana II*: learning HOW to grow

Considering means of constructive alignment is pivotal for piloting a sustainability-oriented service-learning assignment. The initial step to grow bananas is to find proper ground and prolific soil, after all. This corresponds to carefully applying means of *constructive alignment* by taking into account framing competencies and learning objectives [in November 2018 at B, #4]. For bananas, the place that ideally qualifies for sowing comprises much sunlight and functioning drainage. As to *praxiSDG*, these conditions were provided by the governing board in terms of enthusiastic commitment and bustling attitude.

The following step requires a hands-on investment. Pits for the banana plants have to be dug. Therefore, the planting zone needs to be cleared from uncontrolled growth. The bigger the hole, the more soil is obviously required, which is better for the plant. In a similar vein, *piloting praxiSDG* [from December 2018 at C, #5] meant considerable knock-on investment in both intellectual and real terms in order to provide an asynchronous learning experience from scratch, including concessions made due to travel distances and costs.

3.3 *banana III*: reflecting WHAT to grow

The format evolution is pretty volatile at this stage. This is primarily due to the intense adaption and reflection of what to provide for different institutional stakeholders given tremendously changing context conditions and needs. Thus, stakeholder feedback leads to ownership implying loops of didactic adjustment, re-edition, pitch, re-edition, adjustment and pitch again.

Subsequently, seeds need to be selected; their quality is usually assessed based on precognition through experience. As to *praxiSDG* this resembles *feedback* loops that indicate learning through trial and error. Debriefing sessions accompanied the format kick-off [in January 2019 at C, #6]. Hence, the seeds were sown, carefully paying attention that the encircling soil was compact enough to prevent interfering air from entering.

For the upcoming weeks, the optimal irrigation is important in order to ensure perfect conditions of humidity for the seeds to sprout. As a result, *ownership* has gradually been created. Taking a corresponding look at *praxiSDG,* patterned paradigms were to be reconsidered. Given the institutional framework conditions of challenging curricular, embedding the format was paused and postponed [in February 2019 at C and B, #7 and expected trend].

Fertilizers push the seedlings to grow, those rich in phosphor in particular. After that, patience is needed while waiting for the plants to develop further. The sustaining *praxiSDG* fertilizer was provided [in February 2019 at D, #8] by enhancing commitment through an *adjustment* of structural embedding. This eventually guaranteed the continuity of format evolution.

Once the banana plant fructifies after roughly a year of growth, the dark-green fruits are harvested. This indicates that *praxiSDG* required a carefully designed *re-edition* [from October 2019 at D, #9]. This meant at this stage providing a blended-learning assignment with clearly defined e-learning components, including a comprehensive learning management system and webinars, and semi-affiliated partner organizations that would serve as anchor organizations with genuine project involvement.

The ripening process for bananas is in full swing once the fruit is turning lime green. This is the moment when the *praxiSDG pitch* took place [in June 2020 at D, #10] while switching to a fully-fledged digital learning due to upcoming Covid-19 restrictions.

The still green yet slightly yellowish colour marks the perfect moment of tropical heats for retail-sale delivery of bananas. Simultaneously, in the northern hemisphere, the *re-edition* of *praxiSDG* took place [in November 2020 at D, #11 and expected trend] by turning it into a fully-fledged, digital learning experience.

Yellow with some greenish shades indicates the release for distributing bananas to domestic destinations, such as independent shops or supermarkets. Arriving at the designated destination mirrors with the decisive *adjustment* to *praxiSDG* of enhancing commitment through structural embedding [from January 2021 at E, #12].

Yellow with a few greenish tips just represents minor changes in quality for the perfect moment bananas are sold to the final consumers. For the *praxiSDG* lecturing tandem, this meant the customized *pitch* of switching to English due to international audience and stakeholders [from February 2021 at E, #13].

3.4 *banana IV*: addressing WHERE to grow

At this stage, the direction of growth is remarkable. First of all, the format obviously gains momentum in terms of widening the intra-institutional scope. Extended to an inter-institutional dimension, the format is consolidated, formally through curricular integration, and informally through experiences shared by testimonials. Eventually, the format serving as catalyst adds a completely new quality and horizon to academic development.

Full yellow signals the best moment for treat. *praxiSDG* widens the *intra-institutional* scope through extending the qualitative and quantitative range of the service-learning assignment. Four sustainability-related chairs were committed and involved [from February 2021 at E, #14], mainly determined by stakeholder interests in tropical forestry.

Bananas at this stage are fast-moving goods. Correspondingly, *praxiSDG* reaches beyond the institution quickly. The scope extends to *inter-institutional*; the learning assignment attracted attention of four chairs at E and one related to sustainability management at F. New and more stakeholders were involved [from May 2021 at E and F, #15]. Further co-operations are envisaged.

Once bananas turn yellow with brownish sugar spots, they need to be eaten soon. This marks the moment for *integration* by refining the attractiveness of *praxiSDG* vis-à-vis its structural embedding, i. e. fitting into existing curricular frameworks. With this purpose in mind, *praxiSDG* was strategically coupled with curricular modules of project management [from July 2021 at E, #16] in order to ease its further implementation.

Since, during the ripening process, bananas produce *ethylene* acting as hormone, the flavour is indirectly affected. Among other things, this gas stimulates the formation of *amylase*, an enzyme that breaks down starch into sugar, influencing the taste of bananas: The sweeter, the more ripe they are. Similarly, these were the *testimonial* moments of *praxiSDG* serving as triggers, teasers, drivers or keys for feasibility and viability. The infamous *proof of the pudding*, however, is yet to be done by providing scientific, SoTL-based indications of *praxiSDG* [from January 2022 at E, #17] serving as customized, exploratory learning with sustainability impact.

Last but not least, a similar banana-like, *catalyst* transition takes place in the context of *praxiSDG*: After all, awareness of considering it a strategic distribution instrument for the purpose of designing and supporting patterns of higher order facilitating modular sequences (*tracks*) has been raised [since March 2022 at E, #18 and expected trend], too.

Figure 5: Maturation impact on *praxiSDG*.

Applying different stages of banana maturation – *banana I*, *banana II*, *banana III* and *banana IV* – to the *praxiSDG* design process reveals tastes and aspects resulting from institutional peculiarities and ambitions, mainly related to stakeholder needs or institutional requirements. They can be summarized in four lines:

1. Realizing WHY to grow: The initial notion and the certain sense of mission are keys to nudging format development. Despite the fact that institutional touchpoints are less relevant, they may well exert an intellectual triggering function.
2. Learning HOW to grow: The methodological and didactic scope constitutes the backbone for format development. Know-how and skills of aligning assignments in a constructive way are provided through institutional frameworks.
3. Reflecting WHAT to grow: The narrative of the learning assignment considerably depends on its institutional embeddedness. Contexts play a pivotal role in terms of stakeholder involvement, contents and accreditation.
4. Addressing WHERE to grow: The resonance determines both direction and pace of format dissemination. This requires means that are conducive to enhancing visibility and publicity within and beyond institutional frameworks.

4 Monkey-peeling method

Pursuing intuitive moments sometimes appears more promising than following patterned or institutionalized behaviour. Peeling bananas like monkeys is less commonly practiced even though it is much more efficient. Thus, what we can learn from monkeys peeling bananas is:

- Mimicking behaviour that results from observing and learning through commonly shared socialization is worth questioning from time to time because it might turn out to be counter-intuitive.
- Striving for the diverging, more intuitive approach, while thinking the reverse way, for instance, learning opportunities might be easier to be identified and implemented in permissive and experiential settings, such as invoking experiences first.
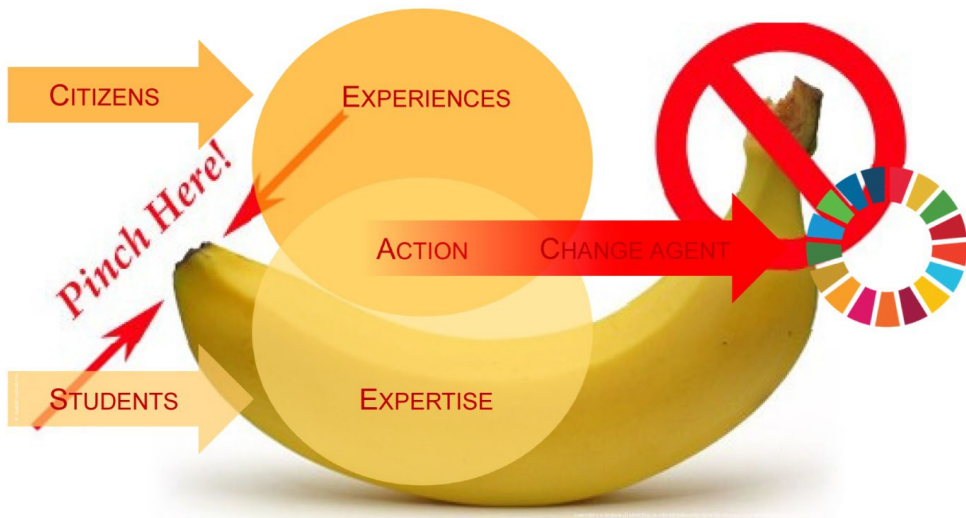

Figure 6: Monkey-peeling method of *praxiSDG*.

In the case of *praxiSDG*, this reasoning leads to the following implications (fig. 6):

1. The service-learning format would not be in place today if the design process had not started at the opposite end. Instead of serving the *demand*-driven institutional *mimic* to embrace the SDGs through contributing to teaching capacities, an *option* was placed, decoupled from any institutional requirements (necessities and duties), any perspectives of realization and implementation, let alone any expectations of success.
2. Sustainability-related contexts might be particularly qualified for creative design-thinking, since the sustainability-related bias is considered highly intuitive in terms of being associated with a specific set of values for *change agents*. Thereby, they are qualified for contributing to transformative competencies (Brundiers et al., 2021) and corresponding sustainability-exploring methods of learning (Rieckmann, 2018).
3. Since the factual influence of institutional context conditions may differ considerably, it makes sense to conduct a confidential baseline study addressing their internal significance for the *praxiSDG* design process and their relevance for external *praxiSDG* stakeholders.
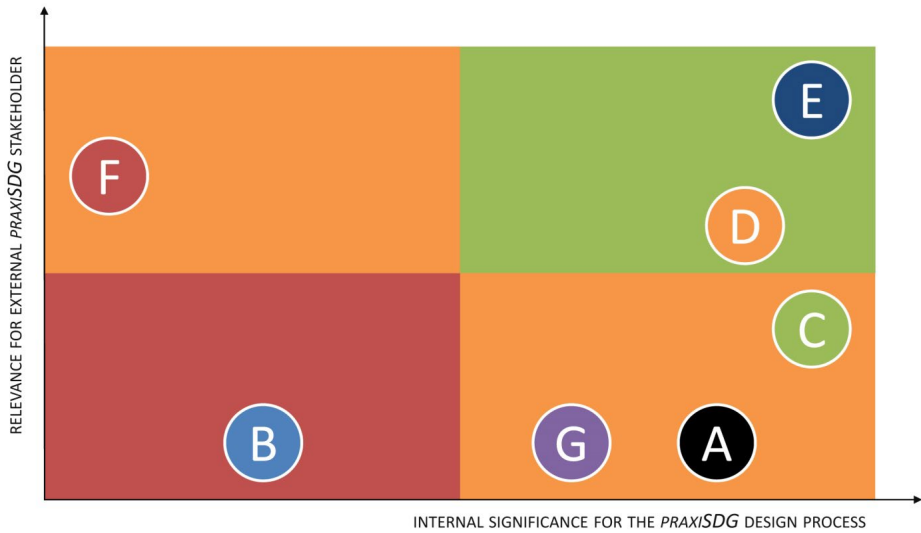
Figure 7: Materiality matrix of associated institutions for *praxiSDG* design.

The relevance of external, institutional *praxiSDG* stakeholders impacting the design process is particularly high at its beginning and towards its (continuing) end (e. g. fig. 7). Taking into consideration the internal significance of institutions for the *praxiSDG* design process, in addition, most value is added when both relevance and significance are reasonably provided. This positive correlation applies to few institutional contexts only.

To conclude, the *monkey-peeling method* is promising for explaining the transfer potential in three ways:

1. Considering and analysing the role of one's internal and external stakeholders *in advance* may improve the design process of a learning assignment since the impact is enhanced,
2. Following an intuition for those institutional and agenda-driven contexts fostering one's self-efficacy and purpose-orientation through transformational framework conditions, and
3. Making use of one's experiences gained and challenged with during the conceptual planning and format design of a learning assignment.

5 Nutrients for thriving and prospering drivers for design

Coming back to the initial question, what does that imply concerning the perfect moment to peel a banana? Similar to the banana, there is the moment for designing sustainability in action. In a process of evolution, the corresponding format *praxiSDG* has been changing its quality. The outcome depends on framing context conditions, comparable to the variables of the maturation process of a fruit. Keep listening to the *inner monkey* of doing things differently: The way how monkeys pick and peel bananas can serve as an inspiration to reconsider one's habits. Thus, the banana typology of *musa paradisiaca* can intentionally be applied to draw a corresponding analogy, including the illustrated between biological nutrients and didactic conditions of success (fig. 8).

MUSA PARADISIACA	← translates into →	praxiSDG
originating from		relies on a well-functioning, fully-fledged and established service-learning concept
domesticated		adapts gradually according to individual and didactic needs
perennial		anticipates replicability with design patterns for scalable cycles
valued for		articulates added-values in targeted ways depending on different stakeholder interests
fleshy-curved		convinces through a strong and lean content base, and a sound methodology
delicious		appears as catchy, appealing and attention-grabbing format with trend-setting attitudes
getting tall		improves in quantity and quality due to the determining principle of positive variation
leaves as large blades		appreciates institutional ad-hoc opportunities for modular-embedded learning assignments
central midrib with obvious veins		emerges from initial impetus to viable trends based on the brand essence or core value
banana heart as bouquet of flowers		nudges through testimonials and practices of unveiling novel, multi-faceted propositions
hanging clusters		culminates in project-driven results sensitive to contexts of civic engagement and learning
protective outer layer		sets out the protected or enclosed training environment for experiential learning
numerous long and thin strings		qualifies for diverse disciplinary affiliations as for designated key-account stakeholders
seeds		promotes non-hybrids according to a small-but-smart paradigm of fostering imitations
managed properly		provides both professionally facilitated and constructively aligned (de-)briefing sessions
picked green		assumes variations a priori and anticipates adaptions as self-concept of format design
induce ripening		evolves through institutional players as driving forces for continuing improvement

Figure 8: Nourishing analogies between bananas and praxiSDG.

Drivers for design can be ranged from extrinsic to intrinsic, whether institutional contexts are involved or not. That service-learning format *praxiSDG* has been motivated extrinsically, at first. The nexus with sustainability, however, has been intrinsically determined. The asynchronous design of the learning assignment has been due to an extrinsic rationale. Likewise, the curricular embedding has been fuelled extrinsically. The digital shift has primarily been extrinsic. The same extrinsic notion applies to having the language adapted. Finding alliances, however, has been initiated intrinsically. The idea of strategic embedding has been extrinsic once more. The catalyst-function rationale, however, has been rather intrinsic.

All in all, half a dozen institutions have been involved, accordingly, nurturing *praxiSDG* for thriving and prospering drivers for design. By comparing the *maturation impact* of institutional contexts, *accelerating* ones clearly outweigh *retarding* conditions. In quantitative terms, most evolutions are due to an extrinsic rationale. In qualitative terms, though, the proof of the pudding is yet to be made. Further explaining and/or qualifying potential nutrients conducive to *praxiSDG* as sustainability-oriented service-learning assignment are already reserved for ongoing SoTL-based research. It is crucial not only to consider context conditions, such as didactic premises, institutional modalities or individual notions, from a paradigmatic-intuitive perspective, but also to theoretically ground implications for implementing *praxiSDG* in a holistic and systematic way. In doing so, existing but still concealed limitations or nudging effects may be disclosed and anticipated for continuing design options.

6 Conclusions

For implementing sustainability-driven service-learning assignments – comparable and transferable to *praxiSDG* – across different study contexts, based on lessons of success and failure experienced, some helpful conclusions can be drawn:

    a)   fill a curricular gap in the study programme's module structure,

    b)   meet a relevant demand for both internal and external stakeholders,

    c)   provide a window of opportunity for crediting civic engagement,

    d)   invoke significant nudging commitment for both lecturers and participants,

    e)   make use of momentum for the right thing at the right place at the right time,

    f)   connect with like-minded initiatives out of the institutional box,

    g)   publish experiences of scholarly teaching and related research, and

    h)   spread the word of mouth (*WOM*) in professional and private contexts.

References

Badley, G. (2001). Towards a pragmatic scholarship of academic development. *Quality Assurance in Education, 9*(3), 162–170. https://doi.org/10.1108/09684880110399167

Bennett, R., Hobson, J., Jones, A., Martin-Lynch, P., Scutt, C., Strehlow, K., & Veitch, S. (2015). Being chimaera: A monstrous identity for SoTL academics. *Higher Education Research & Development, 35*(2), 217–228. https://doi.org/10.1080/07294360.2015.1087473

Boyer, E. L. (1990). *Scholarship reconsidered. Priorities of the professoriate.* Wiley.

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

Canning, J., & Masika, R. (2020). The scholarship of teaching and learning (SoTL): The thorn in the flesh of educational research. *Studies in Higher Education,* 11*,* 1–13. https://doi.org/10.1080/03075079.2020.1836485

Geertsema, J. (2016). Academic development, SoTL and educational research. *International Journal for Academic Development, 21*(2), 122–134. https://doi.org/10.1080/1360144X.2016.1175144

Kinchin, I., Heron, M., Hosein, A., Lygo-Baker, S., Medland, E., Morley, D., & Winstone, N. (2018). Researcher-led academic development. *International Journal for Academic Development, 23*(4), 339–354. https://doi.org/10.1080/1360144X.2018.1520111

Rieckmann, M. (2018). Learning to transform the world: key competencies in Education for Sustainable Development. In A. Leicht, J. Heiss, & W. J. Byun (Eds.), *Education on the move. Issues and trends in education for sustainable development* (S. 39–59). UNESCO publishing.

Stensaker, B. (2018). Academic development as cultural work: Responding to the organizational complexity of modern higher education institutions. *International Journal for Academic Development, 23*(4), 274–285. https://doi.org/10.1080/1360144X.2017.1366322

Sutherland, K. A., & Hall, M. (2017). The 'impact' of academic development. *International Journal for Academic Development, 23*(2), 69–71. https://doi.org/10.1080/1360144X.2018.1451595

Timmermans, J. A., & Sutherland, K. A. (2020). Wise academic development: Learning from the 'failure' experiences of retired academic developers. *International Journal for Academic Development, 25*(1), 43–57. https://doi.org/10.1080/1360144X.2019.1704291