JIS Journal of Interdisciplinary Sciences
Volume 3, Issue 1; 1-8
May, 2019. © The Author(s)
ISSN: 2594-3405

Interdisciplinary Sequences: A Conceptual Commentary

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Abstract: *This paper presents a conceptual commentary on interdisciplinary sequencing, an idea proposed to interlink and interconnect the academic variables from multidisciplinary studies. Interdisciplinary sequencing connects academic variables through reasonable consensus on common grounds. Literature published in the Journal of Interdisciplinary Sciences aims to stimulate a better understanding of interdisciplinary sequencing by creating reasonable common ground. The journal also aims to illustrate the outcomes of academic publications towards mindfulness, through shared knowledge on wellbeing and wellness towards the betterment of socio-psycho-polity, to achieve a healthy environment from within and between multidisciplinary areas. Although it may appear unrealistic, multidisciplinary discourse in academia is possible and interesting. However, the margin of error, and the manner of mistakes, needs to be taken into consideration, which is possible by applying appropriate Skills, Ability, Knowledge, Competence and Intelligence (SAKCI).*

Keywords: Academic conceptual commentary; pure and applied science; interconnecting; interlinking; knowledge sharing; multidisciplinary; wellbeing; wellness; common understanding

Introduction

Academia is broad and complex. However, it is also interestingly interrelated between and within interdisciplinary science (Rhoten and Pfirman, 2006); and sequential academic variables. This interdisciplinary sequencing can be achieved by interconnecting narrow academic lanes and by-lanes. These connections formed by interdisciplinary sequences are extremely interesting, as almost all academic disciplines are interlinked directly or indirectly. The direct interconnections between disciplines are visible, but the indirect interconnections can stimulate interesting new ideas. Rhoten and Pfirman (2006) argue that interdisciplinary science reflects individual orientations towards knowledge acquisition and knowledge production. Riper et al. (2012) argue that essential for the success of interdisciplinary science, is true collaboration rather than mere cooperation. Marcu (2007) adds that an interdisciplinary approach is an approach that involves the transfer of knowledge through application, association, and the integration of systematic and scientific processes. You and

Delgado (2014) state that, since big ideas in science are associated with natural phenomena, interdisciplinary connections must be considered across these big ideas.

We often believe that, as an expert in a particular field, an academician is able to interconnect with other disciplines. We worry about the difficulties in trying to connect the differences in understanding, while also thinking 'out of the box'. Nevertheless, there are similarities that are interconnected, and these can be sequentialized. For some time, we have valued the margin of error when linking one area of expertise with other disciplines. This margin of error, if not understood, can be misinterpreted as a mistake. This misinterpretation can have fatal consequences, by de-linking the interdisciplinary sequential parameters. Moreover, this misinterpretation can create a mind-set that limits thinking to 'inside the box'. Nevertheless, interdisciplinary interlinking is not an easy task, but essential to interdisciplinary science sequencing. According to MacKinnon, Hine and Barnard (2013), the successful building of interdisciplinary science is a measure of the success of the disciplinary sciences.

Examples of interdisciplinary sequencing, as found in the applied sciences, are quite familiar and often provide links between academic disciplines. For example, sociology is often covered within the humanities and in education, and vice versa. In the field of pure science, we do often interlink various subjects that are considered belonging to separate disciplines, for example: biology with chemistry; mathematic with physics and statistics; and so forth. The assumptions of interdisciplinary sequencing can be valid if we value the margin of error, and do not view this error a 'mistake'. Rather this 'mistake' can be sequentialized through proper scientific and mindful integration of Skills, Ability, Knowledge, Competence and Intelligence (SAKCI) (Rajbhandari, 2017).

Moreover, within the same discipline, we find many interlinked areas. For example, in the area of education, we have mathematics education, technology education, special education, educational management, educational leadership, and so forth. Similarly, in other disciplines, whether applied or pure science, we have quite a familiar interdisciplinary sequencing of subjects or disciplines. Therefore, the purpose of this conceptual paper is to logically describe interdisciplinary sequencing between and within areas of study in both the applied and pure sciences.

Ontology of interdisciplinary sequencing

In the previous issue of the Journal of Interdisciplinary Sciences, an attempt was made to create interdisciplinary sequencing by collating and publishing scientific research papers from various interdisciplinary areas. A response that I often receive from colleagues when informing them about a new issue of the Journal of Interdisciplinary Sciences is: "Oh this is not my area, especially this particular research paper". I get this type of response in different voices, but all with a favourable tone. I do not consider this a problem, as it indicates a lack of appropriate SAKCI.

On many occasions, in preparation for the publication of a new issue, I make print copies for the final-proof check. After the online publication, these copies are up-cycled by distributing

them to students on the university campus in South Africa where I work on a contractual basis. I give these papers away randomly while on my way home from my office.

My office building does not allow contract workers to print, copy, or scan at the premises, as they are not permanent employees; and as a way to reduce expenditure. Contract workers have to go to the faculty office or to the library, where they pay for these services. My faculty printing facility is on the third floor (I am on ground level in the other building). To get to the printer/copier room, I have to walk about 369 paces from my office building to take an elevator/lift to the third floor. Thus, I can empathise with the students who have to use the library facility and who have to pay to print, copy, and scan. For a student on a small budget, this can be very expensive.

In my experience thus far, none of the students have refused the copies, and none have said they don't want them or that the topics are 'not their area'. All of the students I have come across accept the papers and indicate that they can spare the time to read them. It makes me feel good to give away the papers, as this is at least one way to foster an understanding of interdisciplinary sequencing.

Conceptual Commentary on Interdisciplinary discourses

Interdisciplinary discourses are common in academic. These discourses have led to the concept of interdisciplinary sequencing by establishing common ground for understanding. Although academia is broad, most of its branches are interlinked, which can sequence a common understanding, albeit studied as a separate field of scientific undertaking.

The Journal of Interdisciplinary Sciences Volume 1, Issue 1 (November, 2017) published its first issue after it was founded. This issue contained research papers from various disciplines such as education, engineering, science, and psychology. Although all these papers published on one platform may not be directly interlinked, some variables are related to interdisciplinary sequencing. For example, Omal's (2017) research on student involvement and participation can strengthen the university in terms of social, psychological, and political (at a policy level) wellbeing. Similarly, the paper by David (2017) on the learning behaviour of gifted adolescents, contributes to social wellbeing by creating understanding of, and sensitivity toward, these learning disabilities and disorders. In the same way, the paper on the improvement of Yagi-Uda antenna for signal reception, contributes to the improvement of livelihoods through the acquisition of fictional pleasure while at rest (Kasema & Michael, 2017). In another paper by Lain et al. (2017a) on the Genome Algorithm, a contribution was made to furthering species research, treatment of major diseases, precision of medical exploration, and agricultural breeding; and to more accurate and complete repeat research using an algorithm called UnSaReper, which is similar to RepeatScout and RepeataFinder (Lain et al. 2017b). All of these interdisciplinary areas are sequential according to one common variable, i.e., the wellbeing of the organization, group or individual.

Likewise, in the Journal of Interdisciplinary Sciences Volume 2, Issue 1 (May, 2018) Rajbhandari (2018) elaborates on the theoretical parameters of implementation, thus

explaining theoractiveness. By understanding the theories and putting these into practice, sound work foundations can be built. These foundations are built through performance and connections, and are resilient to personality distortion preserving, therefore, the wellbeing of the self and others. David (2018) extends the notion of understanding, and generating a better understanding of others, by explaining how to ensure the wellbeing of gifted adolescents. Qutoshi (2018) explains how to maintain the momentum of betterment for the wellbeing of the organization. From sociology and gender studies, Poudel (2018) presents empirical cases that explore the need for the wellbeing of women. Similarly, Ashrafzadeh et al. (2018) describes a milestone achievement training project to upgrade the wellbeing of diabetic patients. Finally, another remarkable research project on team-based learning conducted by Schroder et al. (2018) contributed towards explaining the wellbeing of patients through physical therapy during a neurorehabilitation course.

In a recent publication of the Journal of Interdisciplinary Sciences (Volume 2, Issue 2, November, 2018) articles were published from intercontinental and interdisciplinary areas. These papers came from the interdisciplinary areas of socio-politic, gender, health, computer-sciences, education, psychology, and so forth. All these papers were similar in one respect: wellbeing and creating wellness for all. For example, the paper by Jalata (2018) explored socio-political aspects related to human welfare through democracy and independency. These aspects were described in relation to historic evidence, and by expanding the meaning of democracy. Similarly, Khitruk (2018) discussed the gender crossing of McCloskey and her theory of the choice to live as a male or female, although born as male – a remarkable notion of individual choice and livelihood satisfaction. Veerburg et al. (2018) produced a systematic review of meta-analyses on moderating computer-based health education (CBHE); and concluded with an effectiveness and positive outcome for the adult population. This study found that CBHE had a positive effect on the improvement of health-related outcomes compared with traditional health education, thus offering social wellbeing and wellness. Gaddy et al. (2018) studied retention-time perspectives of US Army personnel. They argued that to maintain a positive physical and psychological state among US Army personnel, continuous effort must be made to enrich and enhance their commitment; and that retention time could be past-positive rather that past-negative by providing psychological wellness training for soldiers to meet the demands of an ever-changing and conflict-ridden world.

In the area of educational sciences and its multidisciplinary branches, integration of subjects from within and outside the discipline is essential. This can provide an opportunity for students not associated with an institution, thus generating motivation to enroll in either school or higher education. Hamrick and Slate (2018), in their study on enrollment in doctoral programs over an 11-year period, found that opportunity and efficiency provided by academic institutions generated an increased enrollment among black students in various multidisciplinary degrees. This contributed towards closing educational and achievement gaps; as well as increasing the educated populace, their economic growth, and their improved wellness. Similarly, Liquido and Mendez (2018), in a study on the training of teachers in the handling of pupils with emotional problems, showed a significant improvement in the level of discipline and instructional self-efficacy, improving the wellbeing of learners' personal and academic lives.

The current Volume, No. 3, Issue 1, that is being published in May 2019 is a compilation of research papers from various multidisciplinary and interdisciplinary sciences. The commentary on the interdisciplinary sequencing that has been conceptualized for these various articles based on empirical research, reflects multi-variate paradigms that contribute to the academic sciences. The editorial commentary on the interdisciplinary sequencing (Rajbhandari, 2019) highlights the academic importance of various disciplines, which are interlinked and interconnected both directly and indirectly. Regardless of differentiation in the studies, the similarities are equally significant providing a broader knowledge, thus enhancing scholarship.

Moss and Slate's (2019) study on the wellbeing of black students in education provides highly regarded contributions in the educational sciences. The study disseminates knowledge about the interest and increasingly persistent enrolment of black students into educational sectors. Similarly, Omal (2019) argues about wellbeing through good governance and the transformation of historically black universities that could provide effectiveness by means of generating good attitudes for academic cultural formation from the governing bodies.

On the other hand, in the medical stream of sciences, Calsius, Noortgate, Roncada, Asch and D'hooghe (2019) explore the wellbeing and wellness of people with Multiple Sclerosis. These afflicted people are benefiting from exercise through participation in the hiking expedition in the Jordan desert. The hiking activity was initiated to improve the life styles of people with multiple sclerosis and generate greater body awareness and identity with a view to improving their belief in themselves and increasing their social resilience.

Boyd, Slate and Barnes (2019) inquiry on the educational benefits of the military provides information that is prominent for both male and female veterans who served in the military for the United States (US) army. Boyd et al. (2019) argue for the equity of benefits for female and male veterans, which should be balanced in order to increase educational opportunities for bringing about wellness in the veterans' lives and for seeking employability. They argue further for the establishment of the social wellbeing of veterans, even after completion of their tenure in military service, as this is likely to reduce their psychological stress and enable them to continue their social lifestyles.

In a succinct manner, Abler (2019) simplifies the language barrier by amalgamating the language structure and algebra from the angle of quantum sentences and speech. His paper gives meaning to the scientific existence of Newtonian sentences to ease the language barrier through the perspectives of Newtonian law which posits an equal and opposite reaction. Even though the number of potential languages is infinite, their basis in the quantum-newtonian system is so stable that all languages have the potential to be learnt by people. The quantum-newtonian basis of language is so universal that we may expect languages of extra-terrestrial civilizations –if any exist– to have the same formative properties, and to be mutually learnable. Furthermore Abler (2019) draws attention to sentences asymmetrical modification in light of the mysteries of science and philosophy that took the shaping from human beings towards the simplicity of equations into languages and sentences for the wellness of language commonality.

Similarly, Kosif, Diramali and Yilmaz (2019) present an individual's personality analysis with the anatomy of the auricle to give clues on the personality characteristics. In respect of this, both female and male personality characteristics were studied to give meaning to the importance of the auricular angle of the ear, which is posited as an important organ to judge human personality. Nonetheless, variations occurred while reaching maturity of age. They further point out that the aesthetic appearance of the ear and craniofacial balance are directly linked to mental health. Any natural or surgical defects can have consequences in psychological problems affecting a person's social life and wellbeing. In connection to the wellbeing and wellness of individuals, groups and the community, Pimentel, Flórez and Baena (2019) argue in favour of the safety and wellness of Colombian miners from arsenal contamination and advocate for the reduction of mercury-use in Colombia.

Conclusion

Interdisciplinary sequencing is logical and rational in academic discourse. Although various topics are studied within the scientific realm, the disseminated knowledge to general readers is based on sharing knowledge about the wellbeing and wellness of all through particular ontological and epistemological studies. Moreover, interdisciplinary sequencing is also possible within the parameters of research design, such as: qualitative, quantitative, or mixed methods. However, understanding and SAKCI are required for all these paradigms. Discourses on interdisciplinary sequencing may seem unrealistic, but there is reasonable interlinking and interconnecting between disciplines. Despite being difficult to correlate, these difficulties do not make interdisciplinary sequencing impossible. This reasonable interdisciplinary sequencing discourse is an attempt to interlink and interconnect similar and common understandings, importance and practical paradigms of multi and Interdisciplinary sciences.

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Paper Received January 22, 2018; Accepted March 29, 2019; Published May 2, 2019