**Nutrition and Business Informatics**

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**Abstract**

Informatics is an interdisciplinary scientific field that deals with data and its meaning (Jen MY

et al., 2021) and (Bernstam et al., 2010). As we already know, the field of informatics is vast

and can’t be concluded in a single sentence. Even after 50 years of its introduction, it is still an

immature science, which was still been struggling to be classified into one specific domain of

whether it is conceptual, theoretical, or methodological. It is a science which had the

collaborative characteristics of knowledge, technology, informational sciences, and professional

practice (Friedman., 2013). In this paper, we explained about, what is meant by informatics, the

domains in which it had been subdivided through the generations, and explained specifically in-

depth about the two domains of it, they were the nutrition informatics (NI) and business

informatics (BI). Informatics is a scientifically emerging field which is being constantly

improved and updated. For effective rationalization and explanation of it, a degree of investment

and effort is needed. The main aim and objective of this paper is to elucidate legibly about

informatics along with clear explanations on the subdomains of business and nutrition

informatics, based on the PBL spreadsheet, through the discussions what we had learned in class,

along with the literature findings. We also explained about the defining characteristics of these

subdisciplines, their drivers, redundant characteristics, and the analysis of gap from what we

have learned and understood.

**Nutrition and Business Informatics**

These were the important domains of informatics, to study which there was the need of

both computer skills and informatics knowledge(cnmdpg.org. (n.d.), 2022). There was also a need

to analyze, learn excel, the information on both nutrition and business trends, along the proficiency

with technology to work efficiently in a data rich world for both domains (Nutrition informatics.

EatRightPro. (n.d.)).

**Informatics**

It is a branch of science which follows a correlation between the information sciences and

the application domain(Friedman, 2013), through smart computing, which further can connect

people and information systems (Baker et al., 2016). Informatics is all about integrating the

technology with different sub-systems like health care, business, music, etc. The domains of

informatics up to date were, health informatics, business informatics, clinical informatics, legal

informatics, history informatics, biomedical informatics, nursing informatics, nutritional

informatics, and music informatics. In our paper, we are going to explain in detail Nutrition

Informatics and Business Informatics.

**Nutrition Informatics (NI)**

It is a new branch of healthcare informatics that focuses on the management of data required

for dietetics practice. The successful acquisition, organization, storage, and appropriate use of

information, data, and knowledge for food-and-nutrition-related problem-solving and decision-

making is defined as nutrition informatics. The mission of this branch was to promote

knowledge and experience by integrating nutrition data with standards, protocols, and technology

for improving the health care quality and workplace efficiency (Rusnak & Charney, 2019).

Furthermore, NI also describes the collection, analysis, and application of dietary data, by offering

important information for both private entities and dietary practitioners to design a way of life that

meets human nutrient requirements (Joshi et., 2021). As computer systems in a clinical setting can

be helpful in providing improved and accurate nutrient delivery by assuming the accurate rates of

malnutrition, weight loss, based on the blood glucose values, clinician efficiency, and error rates,

this branch of informatics had contributed to significant improvement in patient outcomes (North

et al., 2015).

**Gap analysis.** From the literature, we have learned that NI is the intersection of information,

nutrition, and technology and the nutritional professionals work in an immensely "data-rich

world (Nutrition informatics. EatRightPro. (n.d.)). Based on our comprehension from discussion

postings and mini lectures, we learned what the data exactly indicated and what knowledge and

abilities were necessary for an informatics specialist to be prominent and successful. We

discovered that essential competencies such as computer skills, statistical analytic skills, and the

assumption of malnutrition were crucial.Through the PBL spreadsheet, we analyzed the already

known facts and what needs to be known facts so that based on these types of factors, the disciple

can be more improvised.

**Redundant characteristics.** After a thorough analysis of the PBL spreadsheet, the attributes

mentioned in the PBL spreadsheet, which were redundant to our topic were the privacy and

security concerns in informatics and the usage of technology for teleconsultations.

I feel that privacy is not required for nutrition informatics because everyone needs to know the

exact nutritional values to prevent malnutrition. As we care for and respect for patent’s privacy

and security according to the rule of HIPPA, replacing the patient’s name and personal information

can be helpful, but their dietary data analysis can be useful for future generations as a referral, as

the definition of NI itself, states that the effective retrieval of the data, so that this can solve food

and nutrition-related problem solving and for effective decision making for dieticians.

Also, teleconsultations are used as they can save time to fore patients and clinicians and can be

effective during pandemic times, but according to me, this does not work for NI because

malnourished people need direct motivation from the clinicians for maximized effects.

**Drivers for nutrition informatics.** The drivers for NI, based on the literature search,

wasthe usage of technological and technical skills, artificial intelligence for the development

of an app (Jacobsen, 2022) which can analyze the number of nutrients in the food which we

intake by scanning the food, work on the mechanism of calculating the wavelength of light

emitted by the scanners, also, the creation of an app that can provide a daily reminder of the

nutrients which they need depending on the body BMI status (Digital Trends, 2013).Based on

the (mini-lecture 6) Informatics is often connected to the data, Information, knowledge, and

wisdom by using knowledge, communication, and data analysis skills, one can understand the

nutrients needed and can indicate them to the patient with effective communication.With strong

mathematical and statistical skills, we can calculate the number of nutrients that the population

had taken and needs to take to prevent the occurrence of malnutrition (Discussion 6).

**Business Informatics (BI):**

The assimilation of information science and technology into business, with utilization of the

management tools, for analyzing the data which was related to the business is the main objective

of business informatics (Paul et al., 2018). It is a fusion of business, management, information

science and technology. Business informatics is a branch, which can help in better decision making

in this fast-developing world to run with profits. In basic terms, it facilitates decision-making and

simplifies the delivery of essential information, allowing for better judgments to be made more

quickly. Business informatics is a branch were privacy and security had the highest priority to

play, protecting the company and its records, from cyber security attacks, must be of the prime

concern. (Zabukovšek et al., 2020). Effective training of employees on how to prevent these

attacks is vital.

**Gap analysis.** From the available literature, we understood that the discipline of business

informatics studies how technology, business, and society interact. The field uses information

management systems to process, manage, and analyze business data optimally. (Paul et al.,

2018). Based on the discussion (Discussion -6) we learned that abundant knowledge of the field

along with skills and ability are important for performing a activity successfully and to achieve a

defined goal*.*PBL spreadsheet gave enough information on the facts that were already known

and the ones that were yet to be investigated in the discipline of informatics. Through the PBL

spreadsheet, we learned about the importance of communication skills in the business field.

**Redundant characteristics.** After a thorough analysis of the PBL spreadsheet, the

attributes mentioned in the PBL spreadsheet, which were redundant to business informatics, were

following theoretical concepts based on the facts. Because we believe that adhering to historical

theory or notions was not useful to the business. As in business, methods change based on

business experience and the status of the market, rather than on old beliefs. Furthermore,

empathy serves as a redundancy because empathy cannot be as useful in business as it was in the

health care domain**.** Because we believe that, in the business world there needs to be a sense of

competency rather than having empathy to succeed with your reports and products.

**Drivers for business informatics.** Database technology, networking technology, and

communication technology are all significant components of business informatics, and

competence in these domains is required in addition to data sciences knowledge (based on the

PBL spreadsheet and class discussions). According to the literature, to gain a deeper understanding

of the business informatics, one must have knowledge of topics such as business statistics,

structural programming, and business intelligence systems (Tumbas et al., 2019). Through (mini

lecture 5, we had learnt that “Informatics science tests the adequacy of scientific knowledge in the

domain and challenges commonplace generalizations. Technical knowledge and competence in

digital technology, abilities dealing with specific digital technology applications, and willingness

to participate in digital culture are all vital for business informatics.

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