

# Concepts of professional career of future engineers-metallurgists

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## Abstract

*The article reflects the results of investigation into actual concepts of professional career of future engineers-metallurgists. The aspect of concepts contents depending on the type of attitude towards professional careers is analyzed.*

*Keywords: career expectations, engineers-metallurgists, profession, self-realization, attitude, content.*

## Importance of the problem

The study of peculiarities of career expectations of future engineers-metallurgists assumes the researches of their common view about professional life phenomenon, determination of its value and place in the person's life, revelation the degree of career desirability and also the level of understanding of necessary conditions and possible difficulties in professional life realization. Essential understanding of future specialists, on our opinion, is the basis for their relation to professional career, which has formed in result of lifetime and professional experience accumulation at the stage of education.

The notion "professional career" means the realization of professional opportunity of a person and leads to subjective and objective success in professional career [3]. Professional career is understood as professional advancement, growth as the process of professionalization, the result of which come personal changes, leading to a high level of professionalism, achievement of occupational status and providing a feeling of satisfaction [5]. Career expectations appear to be the regulator of professional behavior and activity; they expose the peculiarities of objective reality reflection and allow to determine the degree of adequacy of this reflection, i.e. to determine the character of personal and objective interrelation. Career expectations are the emotional-evaluative attitude to a certain stage of professional activity development, which forms the professional

position of a specialist, point him at the realization of professional aims, stimulates to person's self-determination in professional activity [2,4].

Concepts of professional career reflect cognitive aspect of career expectations and contain the current knowledge of a specialist about personal qualities, professional background currently formed, knowing of the peculiarities of socioeconomic situation, working conditions of the profession, and forecast of successful intercommunication within the system of professional activity. Such concepts reflect the interrelation formedness level of the subject of professional activity with the labour object.

## Formulation of a problem

Career expectations of future engineers-metallurgists while choosing concrete place of employment are determined by some specific content connected with specific nature of their professional activity and professional education, complexity of modern socioeconomic conditions, peculiarities of engineering and manufacturing process [1].

That is why the concept of professional career of future engineers-metallurgists should be examined on time with the aim to clear many important moments, such as: if the future specialist aimed at realization of his career; if he distinguishes his professional career as the opportunity for self-development; if he realizes the aim of his professional career; if he is intended to plan its stages; what the subjective meaning and career success should be expressed

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in; to what extent the personal qualities, which could help in achievement of career objectives are realized, etc.

The aim of the article is to expose the research results of peculiarities of content and character of professional career concept in career expectations of future engineers-metallurgists. This study was undertaken among the metallurgical universities students, studying at different metallurgical specialties, that are kindred according to similarity of generalized structure of activity, specialty 0904 "Metallurgy", the educational and qualification level is "bachelor".

## Research methodology

Future engineers-metallurgists concept of professional career, their content and attitude to various aspects of professional career was examined with the help of "Sentence fragment" methodology (author's development) [6]. This methodology involves semiprojective questioning in the form of sentence fragments and includes 4 conceptual blocks (each contains 4 incomplete phrases), which show:

General meaning of the notion "career" (meaning - what?).

Subjective meaning (aim – what for?)

Implementers (conditions – how?)

Difficulties in realization (negative conditions - what prevents?)

The answers were analyzed with the help of content analysis. The peculiarities of attitude to professional career were determined through

the definitions of "career", "profession", "work", "individual career success", "personal qualities of a specialist", "difficulties in achieving the goals".

All the answers, basing on certain characteristics, may be combined in three types of attitude to professional career: positive-active, positive-medium, negative, which have their peculiar content. Analysis of the sentences content allows to study directly the concept of professional career, determining attitude to it that forms in common the peculiarities of career expectations of students under test.

## Results of research

The content of students-metallurgists' concept that reflects their positive-active attitude to professional career and also a number of notions, connected with it, is given in the table 1.

Table data in students-metallurgists' utterances shows the presence of signs with positive meaning content concerning professional activity of a person, which correlates with their positive attitude to professional career.

Positive-active attitude to professional career develops through recognition the career as important, main and essential event in person's life.

The notion "career" is understood by the students under test as a possibility to realize their own potential, achieve higher level of development, strengthen their professional and social position and obtain success.

**Table 1** Content of the perceptions reflecting positive-active attitude to professional career (n=282)

No	Category of content analysis	Content of perceptions (positive-active attitude to career)
1	Career is an important place in one's life.	lifestyle; it is very important; the main; is of great importance; meaning of life; play a critical role; important; must be successful; support; joy; power; the main; all; realization of potential; stability factor; determines the place in society.
2	Profession as an important lifeseide.	to work successfully; to find a job; in order to be in-demand; in order to have a knack for doing something; in order to learn the world; in order to advance in job ladder; in order to build your own future; in order to work on a higher level; land a job under calling; get an appointment; in order to connect the life with it; to be happy; in order to find yourself in the life; in order to be keen in it; work and enjoy; to become the great names of history; assurance of the future; to carry out responsibilities qualitatively; the ability to charge myself with job; to build an interesting life; self-knowledge; to know professional details; to make the way; to find the place in life; to gain knowledge in certain field; to find the calling; in order to simplify working activity; to leave something after yourself; to increase the level of intelligence; clear future.

3	Work as the conditions for career realization.	activity, to which a person espouses completely; the way of realization and improvement; in order to make good career; favorite activity; self-improvement; way out to the world; freedom; career development; the second home; art; dignity; the way for discovering and realization of your abilities.
4	Career as self-realization and development.	personal success; prove something to yourself; in order it was interesting; in order to discover the best qualities; in order to realize yourself; in order to develop yourself; to grow in own eyes; in order to express yourself; realization of ambitions; to feel yourself in adventure; in order to learn something new; to be in demand and cultural people; in order to realize yourself; in order to develop yourself; self-affirmation; in order to imagine somebody on your place; an important factor of person's development.
5	Career as the possibility for achievement of high level of professionalism.	to be specialist in your field; to be high-level specialist; getting an experience; commitment to excellence in your profession; improvement in profession; knowing of your profession; the work in which I keen; in order to a professional; the ability to work and enjoy; skill development.
6	Realization of a career in the own profession.	It is not easy, but possible; possible; it is good; to be the first in metallurgical industry; necessary; good income; duty; result of my efforts; certainly must be; great responsibility and big money; I want; it is possible by a long stretch of the imagination; learning of your profession; I hope it is possible; the way of self-expression; will build quickly ; essential; the benefit of my country; psychic income; constant training; it is real; not quick ; I steadied for a reason; to become a director of a plant; more duties and responsibility; position on the shop floor; rearrange me own manufacture; development of the branch; an appointment of chief engineer; steady future; achieving of advanced degree; result; quantity and quality of a metal.
7	Career as high social status and acknowledgment.	respect of partners; respect of others; to be respected and well-heeled; to be successful and on the top; solidity; in order to hold necessary appointment; to become valued and respected; in order to realize yourself in society; popularity; to become manager of an enterprise.
8	Internality, self-belief, person's active position.	depends on the person; refine yourself; the level of qualification; believe in yourself; to be better than others; to deal with labour of love; one should love his work; one should live by labour; one should strive, work hard; accuracy; the wish to work; make efforts to be noticed; one should strive; think out a plan; one should be strong; one shouldn't keep his fingers crossed; love to the profession; one should be educated; hard work; dedication, with of the person; one should work hard; study; put the career to the foreground ; cultivate your own abilities; do not stop; live with your work; readiness to recommend yourself; activity ; initiative.
9	Necessity of knowledge and skills.	deep knowledges; to know your business perfectly; erudition; the ability to make decisions; well-bred speech; the ability to learn quickly; the ability to find solutions in difficult situations; engineer way of thinking; the quality of study at the university; to know people's psychology.
10	Necessity of time for career building	a lot of time is required; work twenty-four seven; persistent striving for many years .
11	Inner (psychological) obstacles.	absence of wish; lack of self-trust; short of adequate; short of knowledge; incomprehension of your profession; short of experience; bad build-up; unorganizedness; incorrect profession; short of perseverance; short of skills; short of intellect; low self-attitude; uncertainty of the aim; weakness; age; fear of risk; absence of practical efficiency; absence of will power; failing to come over his defeat; indifference to the profession.
12	Necessity of positive	kindness; intellect; diligence; to be a good person; hard worker; honesty;

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	personal qualities.	leadership skills; self-confidence; optimism; strength; quickness; purposeful; communicativeness; dedication; honesty; judiciousness; insistence; endurance; devotion; attention; accuracy; the ability to persuade; diligence; responsibility; reliability; curiosity; managerial abilities; competence; organised nature; strength and will; commitment to principles; justice; pragmatism; business acumen; wisdom; strongheadedness; reliability; optimism ; trust to people; strength of mind; patience; appearance ; sound estimation; charisma; intuition; politeness; decency; inspiration; loyalty; vitality; ambition; facility ; accuracy; thrift; talent; creativity; beauty ; moderation; calm; reserve.
13	Personal readiness to career realization (responsibility).	Difficulties connected with yourself; failed to open completely; ready to strive; ready to persevere; one should sacrifice himself ; ready to hurdle barriers, work a lot; to do the best; ready to learn the profession meticulously; ready to improve myself; ready to refine myself, time, sleep, rest; ready to further studying; to practice; ready to risk; start from the beginning; ready to start with second fiddle; ready to failures; ready to everything except indignity; ready to low wages; ready to take the responsibilities; ready to except the difficulties; ready to work properly; to read a lot; ready to run at work mornings.
14	Positive metaphora.	stairs, steps, spiral stairs; ascension; climbing; climber atop; Everest; iceberg ; person's growth , stages of person's development; development of mankind; sense of life; competitions, olympiad, sport, marathon; rece; status, stage in the society; duet of striving and success; achieving of a goal; energy; hard working , hard work , business; pyramid; building; building of a house; a tree, flower production( what will take a root ); computer game (the higher the level, the better), a car by road; games of chance; bird; ascent; sea; river; flow of water; mountain and waterfall; zebra; zigzag; pair of scales; merry-go-round; future; dream; money and power ;success in prival life; fancy cake; good marks; victory and preference; reliability; freedom in life; independance; satisfaction; triumph; win in lotto, the second family, love, feeling; art; brthday ; favorite hobby ; elevator.
15	Negative qulities and other events that cannot be combined with career.	carelessness; drunkenness, alcoholism, drugs; laziness, the absence of with to develop; wimpishness; lack of determination; absence of purpose; irresponsibleness; absence of human dignity; bad qulities; lack of discipline; meaninglessness; uncertainty; bumptiousness; lie, craft, dishonesty; stupidity; greediness; pessimism and fear; absence of aim; ignorance; pride; inactivity; indifference to life; irascibility; rebellion; inactivity; meanness; incompetence; despair; sloth; compassion; pride; bad reputation; unorganizedness; dislike of the profession; uncertainty; dishonesty; puerility; demonstrativeness; bad language, gossips; bad health, illness; entertainment; parties, rest.

Career in one's profession is considered to be necessary, important, even if it is hard to achieve success; the due cognizance is devoted to time, which is necessary for career plans realization.

The notion "profession" is understood by these students as the main condition for getting a job, appointment, deepening of professional knowledge and acquisition of desired skills, developing of their intellectual qualities, professionalism in their branch. The notion "work" is connected with obtained profession and career in the future; it is observed as the

possibility for getting respect of others and retaining a dignity.

Among the means of career plans realization of future engineers-metallurgists in the group mentioned, professional knowledge, skills, positive personal qualities, readiness to overtake the responsibility for the actions, activity in professional career realization, readiness to make efforts and overcome difficulties predominate. Difficulties are understood first of all as inner, psychological obstacles, negative person's features, and absence of dedication to the profession.

In figurative associations concerning the notion of “career” there dominate clichés connected with images of steps, building, competition, where one may observe dynamism, activity, person’s insistence. Substantial part of metaphors is devoted to the images of awards, prize - the final result of efforts. In common, metaphors containing images that are positive in character, allow to render their formation as factor of positive attitude to the professional career.

Content of perceptions reflecting **positive – medium** attitude of students-metallurgists to the professional career and also the range of notions connected with it, are given in the table 2.

The results obtained show that positive-medium attitude to professional career reflects its secondary place in person’s life,

acknowledgment of career as unessential and unimportant. Career by this testing group is determined as preferable thing but not of high priority. Subjective meaning of professional career comes down to the possibility of material support and guarantee of well-being.

Please note that the absence of concreteness in determination of common meaning of career, generality of beliefs about its place in person’s life do not contribute to formation of positive attitude to professional career.

The notion “work” is distinguished by students-metallurgists of this testing group as the means for person’s living, which do not have anything common with self-realization and revelation of professional facilities. Work is determined as necessity, duty, and the builder of family facilities, strengthening of personal establishment.

**Table 2** Content of perceptions, reflecting positive-medium attitude to professional career (n=282)

№	Category of content-analysis	Content of perceptions (positive-medium attitude to professional career)
1	Career takes a minor place.	the second place after the family; important, but not the main thing; not the most important; supplement to the happiness, one of the constituent of success; is not connected with me; of less importance; not necessary; I don’t need it; not for me; not the first place.
2	Work as means of living.	means of living; the ability to earn money; source of income; earnings; survival; duty; money only; one of the ways to earn money; method for providing a family.
3	Career for material support.	to live comfortably; to provide yourself; earn more, to be self-reliant; prosperity; big income; to have fair wage; to have more money; in order to earn money; desired economic status; in order to earn for living.
4	Career for well-being of the family.	worth living life of the family; to provide family; in order my family was proud of me; in order to provide capricious wife; to provide the children and family.
5	Absence of concreteness in determination of career meaning.	basically it is possible; easier to live; to get something done; achieving of a goal; to live a fulfilled life; to do myself proud; it must be so; necessary; to prove to everybody.
6	The necessity to support others.	authority; friends; team; good colleagues; successful parents; tutor; wife; people’s trust; sound and loving family.
7	Happening, luck, success, connections.	connections; life circumstance; luck; money; connections; close acquaintance; high-powered acquaintance; miracle happens; correct time and place.
8	Unforeseen event	home front; obstacles; war; governmental action; social problems; misfortune; circumstance.
9	Negative external obstacles.	competition; misunderstanding of other people, dispute with authority; grudge; bad people; corruption; circumstances; sponsorship; clannishness; absence of finances; absence of well-paid work; unfairness; absence of work positions; dysnomia; partners’ treason; bad collective; absence of mutual help; absence of work position perspectives; privately owned.
10	Absence of	good-for-anything (almost anything) sacrifice anything (almost anything)

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concretion in concept of difficulties.	sacrifice anything at all, many; so not sleep and eat; lots; myself; depending on the situation; in different ways; we will see.
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Support of others by this testing group is determined as desired, career planning includes the help of high-powered friends and relatives, that is possibly connected with substantial degree of uncertainty in own abilities, absence of experience to solve tasks, arising in social environment, independently. Concepts of career plans realization feature externality, hope for success, happy occurrence, luck, which suppose decreasing of personal responsibility and explanation of misfortune by external forces.

Among the possible obstacles, which in future specialist's opinion may prevent to realize the professional career; there is an obstacle of social-economic character and also negative actions from other people and events in collective that stop specialist's development.

According to the concretion factor in concepts of students-metallurgists of the mentioned group concerning the possible obstacles and difficulties on the way of professional advancement, there is a low level of it that does not contribute to authenticity and reality of perceptions.

Negative attitude of future engineers-metallurgists to professional career and also the range of notions connected with it, reflects the content of their perceptions shown in the table 3. In perceptions reflecting the negative attitude to professional career, the notion "career" is determined as an event, which is undesired and even harmful in people's live, accompanied with hard work and is of doubtful value. Such understanding of the career may explain its value as people's ascendant, superiority over them. Acknowledgment of career as rigid event for people allows to determine its assignment for action on other people.

In favor of such explanation of the notion of "career" within understanding of students of this group are the results of content-analysis, containing the concept of impossibility to join career with family, friends, and private live. These notions are positive, they do not have anything common with the notion causing negative feelings that form negative attitude of these students-metallurgists to professional career.

**Table3** Content of concepts reflecting the negative attitude to professional career (n=282)

No	Category of content-analysis	Content of concepts (negative attitude to professional career )
1	Career as adverse experience	takes a lot of time and efforts; boring growth along the career ladder.
2	Work as annoying necessity	work as hard labor in exile; hard and churlish; routine; desperate measure; dawdle; hard awakening; necessity; burden; boredom; heel in existence; indifferent for person; tiredness; laziness; dull occupation; income without satisfaction; erase from one's life a lot of time; burden for pocket change; heavy load; serfdom; rough monotony; load; boring routine; burden; unpleasant moment; imminence; pangs; confinement.
3	Career as power over the outer world, superiority over them.	they want to find themselves superior alle the people; power over the outer world; to manage people; to be better then others; to be cleverer then others; to castigate others; to manage.
4	Negation of the opportunity to have career in profession.	is be achieved long and hard ; unreal within my profession; impossible; sustained effort; doen not attract; difficult; my profession is slavery, almost impossible; hardly it will be successful; breaks no squares; dirt and sweat; very long; I am not planning; there is no career in my profession; does not interesting; spent life; only for experience; non-perspective; negligeable success rate; you should forget about that.
5	Necessity of negative personal qualities.	slyness, dexterity, to do the elbow work; to destroy others; to flannel; impudence; to go bald-headed; rigidity; to be impudent; outgun everybody; adulation; cynicism; to able to overstep personal principles; to be able to

		flatter; cruelty.
6	Impossibility to combine career, family, friends and private life.	is not compatible with family life; with life; with personal life; personal time; with sport; love; silence; good mood; friendship; time with family; big family; birth and breeding the child; comfort; friendship.
7	Negative metaphor.	beam; rat races; aquarium with sharks, struggle for existence; monkey plays with document; revolver; heap of iron ore materials (where there is more heavy pieces on the bottom); hen house; hard life.

The negative attitude to career of students under test is also shown in data, where mentioned negative personal qualities among necessary for career realization ones. Probably in perceptions of these students the negative feature is presented by career, which renders such qualities. Students' metaphorical associations of this group confirm negative evaluation of career: images given in metaphors are of aggressive cruel and even derogatory character.

The negative attitude to professional career is characterized by negation of opportunity to build career in own profession, determination of it as to be out of interest, non-perspective or too hard and boring.

### Conclusions

Study of actual concepts of future engineers-metallurgists underling in attitude to professional career allowed to mark the following peculiarities:

- In concepts of overwhelming majority of students under test the notion "career" is confessed as the value that takes an important place in person's life. The notion "profession" is determined as opportunity for self-realization and self-determination. The notion "work" is understood as opportunity to realize the professional career. In common students - metallurgists determine career as, first of all, as the means for improving of financial situation and the possibility for self-realization and development of professional. With that determination of value and meaning of career personally for everybody is rather assure in nature, but under students - metallurgists' estimation, there is a difficulty in building career in own profession.

- In concepts of students-metallurgists there marked high level of understanding the means for career realization, conditions under which it is possible to build it, acknowledgment of personal qualities as the main and shaping factors in career realization, activity and responsibility of own actions. Concerning some anticipate difficulties in career plans realization there observed a very generalized representation

of students under test, absence of reality in combination career with other parts of human's life, concretion in concepts of efforts, which may be necessary in career realization, uncertainty in own abilities to control and manage the realization of professional career.

- Prevailing type of attitude to professional career of future engineers-metallurgists is positive-active one.

So, the research results of actual concepts of professional career and career expectations of future engineers-metallurgists reflect the degree of readiness of young people to accept adequate decisions connected with employment, planning and realization of professional career and also the degree of reality, understanding the aim of professional career, means of it achievement.

The results obtained may be applied while educational activity with students, aimed to formation of professional position and due care toward professional activity.

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